



# Australian Meat Processor Corporation

submission to the

**Productivity Commission**

**Review of Rural Research  
and Development Corporations**

**Contact:** Gary Hardwick, Chairman  
Australian Meat Processor Corporation Ltd  
PO Box 21, Crows Nest NSW 1585  
Tel. 02 9439 6866 Fax. 02 9436 0343

Australian Meat Processor Corporation  
submission to the  
**Productivity Commission Review of Rural Research  
and Development Corporations**

June 2010

Developed by Dr Sandra J Welsman, Principal, *Frontiers Insight* pl  
with and for the Australian Meat Processor Corporation (AMPC).

## Key points

---

### The Presiding Commissioner

Review of Research and Development Corporations  
Productivity Commission  
Canberra City ACT 2601  
rural-research@pc.gov.au

### **Review of public investment in areas such as rural R&D is to be expected from time to time as perspectives evolve on forms of public-private partnership.**

The Australian Meat Processor Corporation, on behalf of its 126 red meat processor members, appreciates the opportunity to contribute actively to this deliberative Inquiry.

As the Productivity Commission recognises in its Issues Paper, 'research and development, with extension to facilitate uptake of research outcomes, plays a key role in enhancing competitiveness and productivity of Australia's agricultural, fishing and forestry industries' [IP p1].

The Inquiry Terms of Reference open broadly around economic and policy reasoning for public support of rural R&D generally. However, the PC is asked to particularly investigate the structure and functioning of the statutory Rural Research and Development Corporation model. This broadens the Inquiry as many 'RDCs' are industry service organisations delivering more than R&D.

The RDC model has evolved under Industry and Government impetus to now include Industry Owned Companies. IOCs fulfil wider roles for their sectors, including marketing, promotion, co-ordinated services and R&D, as noted by the PC [IP pp3-4, s6]. A succession of Governments have provided statutory support to these roles wider than R&D. The 'RDC' identifier is dated.

**The AMPC, as an IOC, considers any inquiry into the structure, functioning, effectiveness and efficiency of RDC-IOCs, cannot separate R&D from other services carried out for levy-payers.** For instance, tabulating R&D income and expenditure alone, without other income and outgoings, presents a narrow view of IOC function, and a limited picture of R&D positioning [IP p7].

**For red meat, the Government contribution to the operation of the three IOCs underlies the collaborative working structures of the entire industry.** This public support takes two forms. The first is providing the statutory basis for industry-voted levies and the services delivered under industry guidance by IOCs, including R&D. The second factor, tightly linked and equally important, is the public funding for a proportion of R&D organised through these companies.

Changes to the R&D element cannot be responsibly considered alone – and the AMPC assesses that this reality is built into the Inquiry Terms of Reference.

**The AMPC identifies three critical questions also associated with the Terms of Reference (TOR), and the Commission's version of the ToR [IP p1]: -**

1. Are statutory arrangements underpinning levy collection and RDC-IOC operation adding value to the industry and the economy through delivery of collaborative marketing, R&D and industry services?
2. What structures should work best for these industries to achieve the Australian policy objective (and economic imperative), of raising productivity through innovation, research and developmental change?
3. Is the public money invested through RDC-IOCs to support research and development, well spent against policy and economic measures?

The AMPC will return to these, as well as TOR points, throughout this paper. Our focus is the AMPC role and position, which is somewhat different to other IOCs, although we work collaboratively on industry and wider programs.

**The importance of R&D is evident across the red meat industry, at farm production, post-farm intensive feeding, meat processing and product stages.**

A series of studies into investment in rural R&D have identified large returns in financial and broader terms within Australia and globally. This is recognised by the PC, although with reservations [IP p9]. Economic analysis and review of concepts such as market failure, free riding and spillovers, will be provided by groups contributing to this Inquiry including the CRRDC.

The Commission itself, in its *Public Support for Science and Innovation* review 2007, reported returns from public investment in rural R&D across 42 global studies averaging near 60% with median return above 40%. On science and innovation support generally, for all industries, the PC concluded that:

There are widespread and important economic, social and environmental benefits generated by Australia's \$6 billion public funding support of science and innovation. On the basis of multiple strands of evidence, the benefits of public spending are likely to exceed the costs. *PC 2007*

The AMPC notes the PC found 'novel innovations' occurring 'across products, processes and organisational forms at the global technical frontier', to be the leading edge. This *productivity R&D* is 'dynamically critical to economic growth and to social and environmental advances'. The PC also found that 'novel innovation has played a particularly important role in industries close to Australia's natural endowments, such as agriculture and mining' [endnote <sup>1</sup>].

Even so, as the PC says, a track record of sizeable returns on public funding should not be the only argument for public support into the future. The AMPC agrees that other signposts of potential for return are important.

**However, the AMPC contests apparent differences in weighting of measures of 'socially valuable investment in R&D'** as indicated in the opening sentence: 'Some of this activity also provides wider benefits to the community by, for example, enhancing environmental outcomes' [IP p1].

As Minister Carr stated in April, based on policy analysis, *innovation in all forms and by all businesses has flow on benefits socially and economically:*

The more productive we are, the more effectively we can compete internationally – including against low-cost countries. *The more productive we are, the more resources we will have to pursue our social and environmental goals.* Increasing productivity is the only way we can get all the things we want – better wages for workers, higher returns for investors, and lower prices for consumers. ... Innovation is absolutely critical to increasing the output of the Australian economy. ... coming up with new ideas and making them work. This is the key to generating more value from any given combination of inputs – the key to lifting productivity. *Minister Carr*<sup>2</sup>

This productivity-innovation imperative is very clear for rural industries.<sup>3</sup> Meat processing adds substantial value to natural endowments, and the Minister's statement sums up the role of productivity R&D and innovation in this sector. **Innovation in red meat processing, including structured R&D, contributes to Australia broadly, in productivity, social, economic and environmental terms.**

Questions arise around models for securing these overarching policy goals – for productivity, for innovation including R&D, and for flow of benefits into the economy. As the Minister also identifies, 'many different factors... influence our innovation performance ... And every sector experiences things in its own way'.

Treasury too acknowledges the vital public role in stimulating R&D broadly in firms and industries through incentive processes, with wider benefits expected.

[A]n effective R&D tax incentive needs to result in firms conducting R&D that they would otherwise not perform because they cannot capture sufficient benefits from the activity to justify an investment. That is, although the benefits of the R&D activity 'spillover' to the rest of the community, it is not commercially sensible for any one individual company to invest. *Treasury 2009*<sup>4</sup>

A sophisticated economy sets such overarching policy objectives and then reflects on what mix of public incentives should work to secure these goals. While spillovers are a general benefit of R&D,<sup>5</sup> a single scheme will not spark innovation nor achieve policy objectives across the board. Sectors vary in costs-return dynamics, market and regulatory environments. Meat processing, computer game creation, and legal services, are different worlds.

**The RDC-IOC model has demonstrated flexibility and resilience.** It has been adapted to different sector cultures and needs, with positive outcomes. The model has proven its effectiveness in achieving advances based on industry-driven R&D and other collaborative initiatives. It has shown strong returns from leveraging both sector contributions and public R&D funding. The working linkage to members is a key factor in the success of RDCs.<sup>6</sup> This is certainly the key for involvement of red meat processor firms in industry R&D [see parts 1, 4].

**Structural effects of the RDC-IOC model also need to be taken into account.**

As stated above, the statutory basis and public funding support to the three IOCs underlie the working structures of the whole red meat industry. These are essential to today's levels of active innovation in red meat sectors, all of which has wider socio-economic value.

This AMPC submission provides information and contextual analysis [parts 1-4], leading into discussion of issues and questions raised by the PC [parts 5-6].

- 1. Formation and development of the AMPC.** Explains the AMPC role within the red meat industry from the 1998 restructure and under the MOU agreed by Government and industry. Governance and financials are outlined.
- 2. Context – features of the red meat processing sector.** Meat processing is a distinct sector within the red meat industry with economic and cultural differences to farming. Vertical integration in these companies pivots on the processing business. There are links, and differences, to general manufacturing.
- 3. Context – national innovation and research objectives.** Government policy objectives for innovation and research provide underlying tests for the PC.
- 4. Processor innovation and AMPC R&D programs.** Provides information on AMPC and MLA research in processing categories and associated issues. Discusses alignment with priorities and performance evaluation.
- 5. Investment in meat processing R&D and innovation.** Rationales for public support to continue rising levels of activity giving productivity and other returns.
- 6. RDC-IOC structures and operation.** Considers the origin and purpose of RDC-IOCs, sector-based foundations for their success, plus potential impacts on red meat industry and its levels of innovation under changed structures.

It can be said that the formation of the AMPC as a version of the RDC-IOC model, and its active evolution, is a defining feature of Australia's modern meat processing sector. The corporatised model with statutory levy collection and R&D funding underlies the industry MOU [part 1]. For the AMPC, the move into statutory levies in 2007 has further opened opportunities for processor driven R&D activities of sector, industry and community benefit.

**Overall, the AMPC supports continuation of the current red meat Industry Owned Corporation arrangements – MLA, AMPC and Livecorp.** However, the AMPC is also conscious of indications that this Inquiry and subsequent interactions will lead to changes in RDC-IOC structures. In this context, and noting the relative balance among RDCs-IOCs, the AMPC must put forward its positions on forms of change quite clearly at this stage.

**The AMPC is stressing the importance of ensuring RDC-IOCs continue what they do best – R&D, innovation, extension and industry services to advance sustainable productivity of enterprises and the sector.** This, of course, involves attention to OH&S, skills, environmental resource management, and markets. Much of this work has been and must continue to be in collaboration with other RDCs and groups.

The sector-based RDC-IOC structures in the red meat industry are key to collaborative efforts that return more than it costs industry and taxpayers. Statutory backing and public R&D funding together are the platform.

If current arrangements are opened for change, the AMPC considers there is room for clarification and improvement. Today's bodies have grown from history. This Inquiry needs to return to the logic behind the formation and operation of these statutory entities. To do this, the sources and intentions of all funding need to be examined. To look just at R&D funds would be remiss.

**With change being forecast, through this submission the AMPC is arguing that:**

- The RDC-IOC model be retained by the Australian Government and the Australian Meat Processor Corporation (AMPC) continues to be structured as an Industry Owned Corporation within the RDC-IOC framework.
- AMPC must be a separate entity, operating at arms-length to AMIC and MLA. As reasoned in this submission, there is no basis for, and potential for major loss from, any move to merge AMPC with other IOCs. AMPC would be charged, as now, to interact positively and effectively with all groups.
- This distinct IOC status is fundamental to red meat processors continuing to pay a levy, at a rate set by AMPC Board and members, to fund the supply chain R&D, marketing and industry programs that are delivering results.
- Red meat processors, as pivotal industry participants, have access to Commonwealth Government matching funding investment for R&D.
- Provisions requiring that MLA be the only service providing company for AMPC programs be reviewed and made generally contestable.
- The AMPC continues as a designated Donor Company as an avenue for optimum utilisation of Commonwealth R&D investment and for leveraging additional voluntary contributions made by processor companies.

In the event of any restructuring, the AMPC would also look to receive and manage all statutory levy funds paid by members, including \$4-6m a year of production transaction levies from red meat processing firms with feedlot and grazing activities. The case for this closer alignment with sector structures is outlined in this paper. Processors, working through the AMPC, and in collaboration with a range of skilled providers, are best positioned to secure returns for the sector, the industry and the wider economy from these funds.

The Australian Meat Processor Corporation Board and staff would appreciate further opportunity to discuss this submission with the Productivity Commission.

Yours sincerely,



**Gary Hardwick, Chairman, AMPC**

Managing Director,  
Hardwicks Meat Works Pty Ltd, Kyneton, Victoria

## Contents

---

<b>Key points</b>	<b>3</b>
<b>1. Formation and development of the AMPC</b>	<b>9</b>
1.1 AMPC governance and interactions	11
1.2 Income and expenditure summary	16
<b>2. Context – red meat processing sector features</b>	<b>18</b>
<b>3. Context – national innovation and research objectives</b>	<b>22</b>
<b>4. Processor innovation and AMPC R&amp;D programs</b>	<b>25</b>
4.1 Processor innovation and research – case studies	25
4.2 AMPC programs – research, development, extension	28
4.3 Alignment with Priorities – and Performance Evaluation	35
<b>5. Investment in meat processing R&amp;D and innovation</b>	<b>39</b>
<b>6. RDC-IOC structures and operation</b>	<b>46</b>
6.1 Across sector issues and co-ordination	46
6.2 Structures, and funding	49
6.3 Governance, efficiency, evaluation	53
<b>Endnotes and references</b>	<b>54</b>



## 1. Formation and development of the AMPC

---

**The Australian Meat Processor Corporation (AMPC) is an industry owned, not for profit company.** AMPC was incorporated as a national member funded public company on 22 April 1998. A Memorandum of Understanding (MOU) signed with the Commonwealth on 27 April 1998 sets out the basis for Federal funding for R&D aligned with then voluntary meat processor contributions.

On 30 June 2007, direct collection by the AMPC of voluntary contributions from members ceased. On 1 September 2007, the Commonwealth introduced a statutory levy to collect funds from all processors. DAFF forwards these levies to AMPC as set out in the Funding Agreement 2007–2010.

In 2010, AMPC has 126 members operating 154 establishments. This represents over 97% of Australia's cattle, sheep and goat meat processing capacity. In 2008-09, processors paid levies of \$17.86m. AMPC project expenditure has increased from \$9.9m in 1999-2000 to a forecast \$16m in 2009-2010.

**The formation of the AMPC as a version of the RDC model, and its successful evolution, is a defining feature of Australia's modern meat processing sector.**

Prior to 1998, two statutory organisations, the Australian Meat and Livestock Corporation (AMLC) with marketing and regulatory roles, and the Meat Research Corporation (MRC) were funded by levies and government inputs.

Working with the Meat Industry Council (then the overarching body for strategic direction for the industry) and industry sectors, the MRC conducted R&D and extension programs that aimed to address on-farm, post-farm-gate and consumer issues. A proportion of R&D funding was allocated to post-farm projects with potential for use in the processing sector, including activities within the Processing Efficiency Industry Priority (\$2.915m in 95/96).<sup>7</sup>

However, there were major issues with the industry structure including the role and performance of statutory bodies. After extensive interaction, industry and Government agreed a restructure. This was implemented under the *Australian Meat and Live-stock Industry Act 1997*.

Three Industry Owned Corporations (IOCs) were established in 1998. Meat and Livestock Australia (MLA) was formed as a producer-owned company to provide marketing and R&D services to the red meat industry. The Australian Meat Processor Corporation (AMPC), and the Livestock Exporter Corporation (Livecorp) were established to manage sector levy funds including by contracting services from MLA.

In addition, a new form of overarching body, the Red Meat Advisory Council (RMAC) was set up to be custodian of the MOU among these parties and the Government. Regulatory functions of the AMLC were transferred to the Commonwealth Department that is now DAFF.

**Red meat industry sectors were engaged in the reviews from 1996 toward achieving this new structure. There were strong differences of opinion.** Rather than the AMPC re-open this debate, it is useful to refer to third-party viewpoints. Two Parliamentary Library Bills Digests outline disagreements in that period.<sup>8</sup>

*BD 79, 1997-98.* Above all is the need for industry to develop a shared vision for the future which enables all segments to pull together and take advantage of the opportunities that have been identified. ... there is not unity within the meat and live-stock industry on these changes. Not only was there division between members of the Steering Committee and Task Force but the Minister has readily expressed regret that industry has not been able to reach full consensus on the new structures. ... these proposals have attracted strong criticism from the former Chairman of the AMLC and a number of other industry leaders ...widely reported in the rural media.

*BD 164, 2006-07.* Digest [no. 79] canvassed the fractious relationships which existed between parts of the red-meat industry at that time, and noted that both the processing and live-export sectors were not to be subject to compulsory levies to fund marketing and R&D activities. ... these sectors had agreed to a system of voluntary contributions to their respective industry services body.

**Processor concerns included their level of involvement in marketing and R&D, divergence on priorities, returns on R&D funds, and cultural differences between production on-farm and processing sectors.** Processors made a resolute case for establishing the AMPC as a separate IOC collecting levies and funding R&D and marketing as part of the shared industry vision and Red Meat MOU [1.2]. A number of processors also hoped to harness interest among companies to pool funds for addressing across-sector issues and developing the industry. These concerns are addressed in current structures.

The AMPC is now operating well for processors, consistent with the notable success of RDCs in working within sectors and cultures to achieve advances.

One of the great strengths of the industry specific RDCs is their linkage to their constituents ... these linkages need to be built into cross sectoral funding arrangements. *Core, Retrospective 2009*<sup>9</sup>

From 1999 to 2006, the AMPC collected usually \$13-\$14m a year in voluntary levies from processing companies, however some sizeable companies did not join the AMPC and were not contributing. By 2006, other companies had indicated their intention to withdraw unless all processors were involved, and there was real risk of the Red Meat MOU being destabilised.

In a formal poll in 2007, with strong support of the Minister, the AMPC gained majority support to request a statutory levy system, extending the RDC model. **This move into a form of the RDC model also opened opportunity for R&D activities of across-sector, across industry and wider community importance** – an AMPC intention as noted in the 2007 Bills Digest [see also part 4].

*BD 164, 2006-07.* In sum, the industry proposes that under statutory arrangements the current program of R&D and marketing investments will be maintained and, if approved by AMPC members, widened to include animal welfare, expanded environment and resource management and some economic aspects to improve profitability and enhance issues management. It further envisages no change to the industry services model which is based on a consultative approach to development of investment plans by AMPC, MLA and the Australian Meat Industry Council as a result of this bill ... all red-meat processors will, in effect be 'members' of AMPC, providing the opportunity for greater consultation processes in that sector.

## 1.1 AMPC governance and interactions

---

**MLA, AMPC and Livecorp, the industry-owned companies that are also RDCs, are fundamental to red meat industry arrangements and effective operation. The collective R&D, funded jointly by industry-government, is also pivotal.**

Implementation in 1998 of the 'red meat reform package' established these now tested structures. As the Australian National Audit Office observed in 1998, these reforms were 'groundbreaking' and required 'considerable effort on the part of all parties' to 'resolve sometimes quite complex implementation issues'. Notably, the 'policy framework for the new structural arrangements was defined by the Government ... to minimise Government involvement in industry affairs, empower industry in running its own affairs and encourage ownership and leadership by industry'.

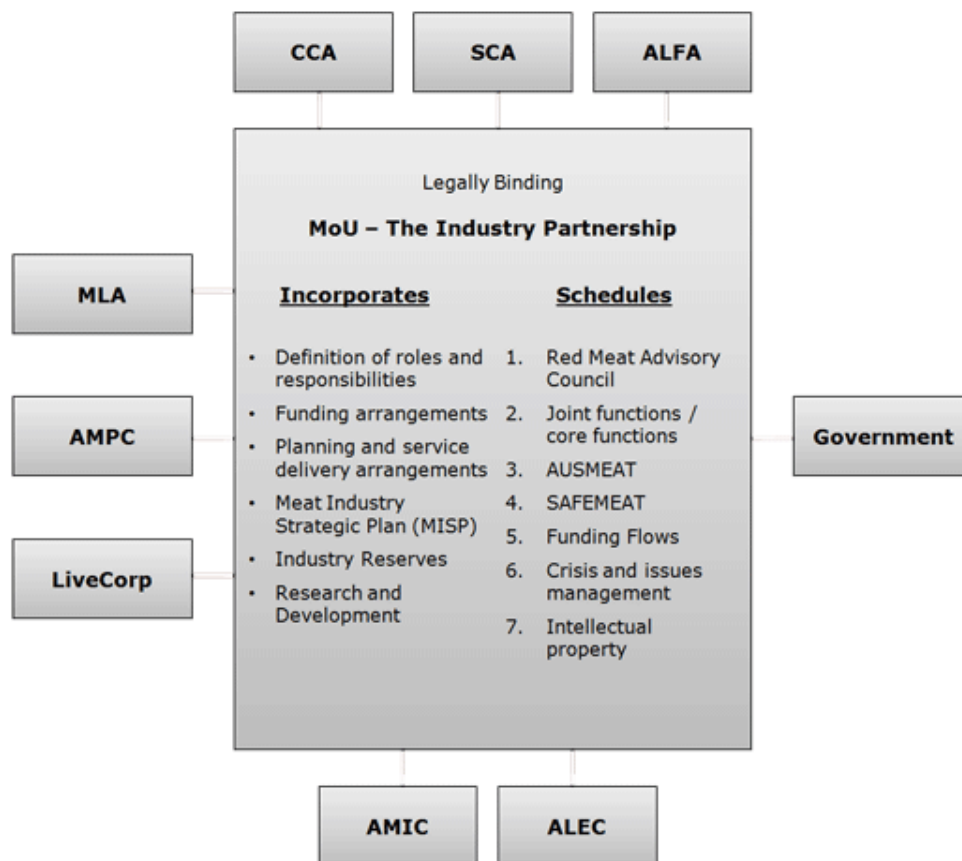
Key elements of the red meat industry reform package were (and are):<sup>10</sup>

- AMLC, MRC and MIC were replaced by new producer-owned company, MLA, funded by compulsory levies paid for by producers, and by contributions from processors and livestock exporters to support agreed collective and core activities
- meat processors and livestock exporters established separate voluntary funded companies, AMPC and Livecorp, with statutory levies reduced to zero, with the Government retaining the power to raise the statutory levies if industry failed to collect sufficient funds to finance agreed collective activities with producers
- peak councils formed a new company, the Red Meat Advisory Council to advise the Government on whole of industry policy and strategic matters
- AUSMEAT was established as a joint venture company funded equally by MLA and AMPC [AUSMEAT is responsible for maintaining a universal trading language]
- Commonwealth matching funds for research and development would continue
- the Department continued to collect and distribute statutory producer levies and took over issuing of export licences and quotas, and
- a MoU was signed among industry sectors, industry companies and Government to achieve cooperation in the overall interests of the industry. Links with Government were established in the MoU and through Deeds of Agreement directing use and accountability for compulsory levies, industry reserves and matching funds for R&D.

**The Red Meat Industry MOU is now in version 3 (Sept 2007).** It is described on the RMAC website as 'legally binding' [Figure 1]. Contractual provisions include commitments tied to receiving statutory support from the Federal Government for both levy collection and matching funding for R&D programs. That the Government can use these mechanisms to ensure the industry structure holds was reinforced by the Minister in a letter to processors in November 2006.

**Which ever way you choose to vote, it is important that meat processors continue to meet their whole-of-industry commitments under the Red Meat Memorandum of Understanding.** That is why I urge you to take an active interest in the poll and vote so that you can have a say in how the proposed statutory levy system will be managed now and into the future.

Figure 1. The Red Meat Memorandum of Understanding (MoU) governs the industry structure and relationships of different organisations – now six peak councils (with the Goat Industry Council of Australia), three industry companies/ RDCs, and the Government. *RMAC website, April 2010*



The Red Meat Advisory Council (RMAC) was formed in 1998. It is a forum for the Peak Industry Councils to discuss multi-sector policy issues. RMAC also provides advice to the Minister on cross-sectoral or whole-of-industry matters. RMAC is the custodian of the MOU and develops the Meat Industry Strategic Plan (MISP) to guide the industry companies, MLA, AMPC and Livecorp.

- **The RMAC Meat Industry Strategic Plan 2010-2015 (MISP3) was launched by Minister, Burke in August 2009.** MISP3 puts a single view of the Australian red meat and livestock industry and provides a development roadmap.
- MLA, as the Government designated Service Provider under the MOU, also develops a whole-industry plan. The *MLA Strategic Plan 2007-2011* includes industry R&D and extension programs aiming to realise the goals of the Meat Industry Strategic Plan (MISP) plus National and Ministerial priorities [see part 4].

**AMPC also has a set of framework and strategic documents.** These includes the Red Meat MOU, AMPC Constitution, the Funding Deed of Agreement, AMPC Strategic Plan 2008-2011, Annual Operating Plans and Annual Reports.

**i) The Red Meat Industry Memorandum of Understanding (version 3, 2007).**

Particular clauses of the Red Meat MOU relate to the AMPC:

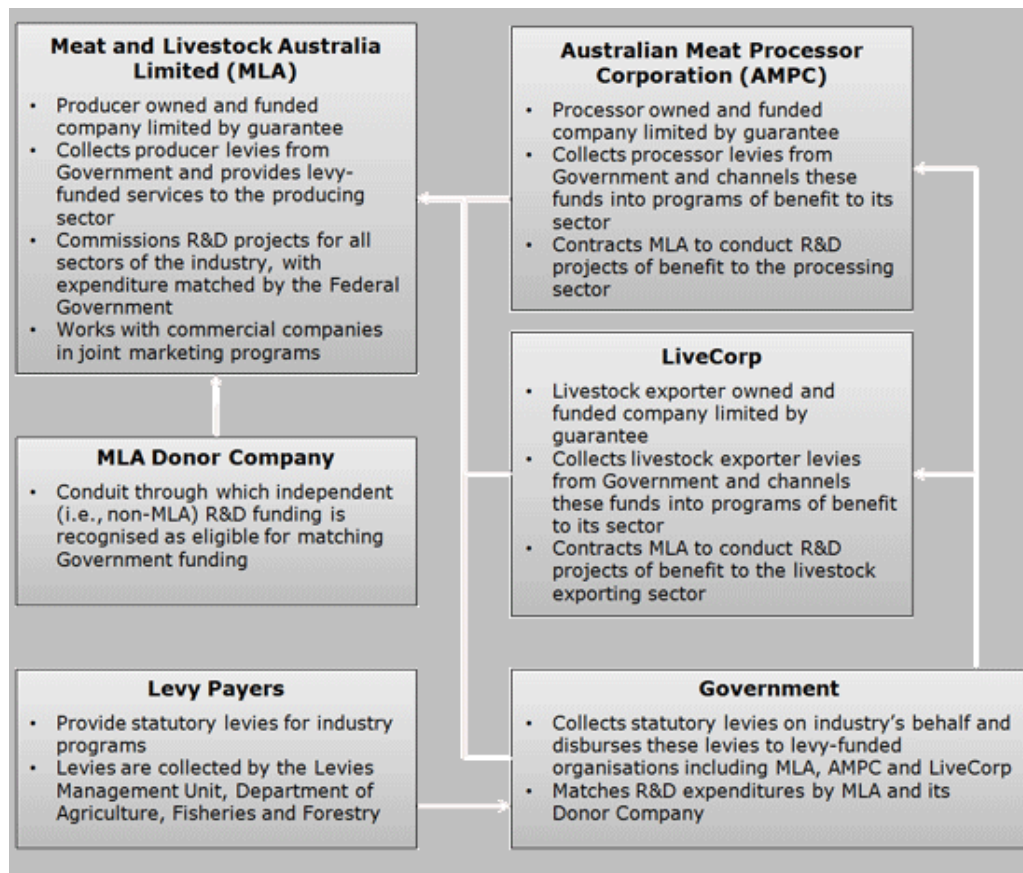
<p><b>6.2 Role and responsibilities of AMPC in relation to AMIC.</b> Role and responsibilities of AMPC will be:</p> <p>(a) to provide management, funding and administrative arrangements for meat processing industry service activities to be undertaken by or through MLA including joint functions and core functions and any unforeseen event which has significant impact upon the industry</p> <p>(b) in consultation with and in agreement with AMIC to undertake activities and provide services on behalf of the industry sectors it represents which are not inconsistent with ... principles of the MOU</p> <p>(c) where services are provided by or through MLA, to develop jointly with MLA and AMIC goals for achieving the vision and strategic imperatives for the industry sectors it represents;</p> <p>(d) each year to prepare in consultation with AMIC (1) a business plan including financial projections for the period of 3 years ... for the performance of functions necessary to achieve the objects of AMPC and consistent with MISP; and (2) an operating plan including financial projections setting out the activities AMPC proposes to undertake ... consistent with its business plan;</p> <p>(e) to pursue the achievement of industry goals identified in MISP in a manner consistent with policies and strategic imperatives developed ... and to perform its functions and exercise its powers in a manner consistent therewith; and</p> <p>(f) to negotiate and enter into contracts with MLA, and with both MLA and LiveCorp, under which MLA will perform, or arrange for other persons to perform, joint functions and services on behalf of the industry sectors they represent for achieving the goals identified in MISP.</p> <p><b>6.5 Marketing bodies, research bodies and donor companies ...</b></p> <p>(c) AMPC is declared to be both the processor marketing body and the processor research body ...</p> <p>(d) ... AMPC, LiveCorp and a wholly owned subsidiary of MLA to be formed ... will each be declared to be an approved donor ... for research and development matching funding purposes.</p> <p><b>7 Industry funding</b></p> <p>(a) (1) The Commonwealth will enter into agreed conditions of funding with AMPC whereby charges imposed on processors under Levy Acts for the purposes of payment to the processor marketing body and the processor research body will be paid to AMPC to fund its activities, including core functions and its share of joint functions. (2) Levies are payable at the rate set out in the [PIEL] Act 1999 and related Regulations, as determined by the Minister in consultation with affected parties.</p> <p><b>9 Research and development activities</b></p> <p>(a) In accordance with existing research and development policy, the Commonwealth will, under Part 3 <i>Australian Meat and Live-stock Industry Act 1997</i>, maintain the matching funding of industry research and development to be undertaken by or arranged through MLA.</p> <p>(b) Industry contributions to industry research and development, and matching Commonwealth funding, will be expended by MLA in the interests of the sector involved.</p> <p>(c) The Minister may from time to time advise MLA of the Commonwealth's priorities for industry research and development to be undertaken by or arranged through MLA for the benefit of the industry and MLA will act consistently with that advice.</p>
---

In addition, the MOU and its schedules specify that:

- **MLA is the only service providing company, unless a service is refused to be provided by MLA.** In such circumstances the proponent of the service can seek alternate arrangements for delivery of the service
- **Donor companies (such as AMPC) should not undertake services/projects that can reasonably be undertaken by MLA,** unless refused to be undertaken by MLA, and
- MLA is required to undertake performance audits of its services and activities. Outcomes of these audits are to be made publicly available.



Figure 2. Funding flows among red meat industry groups as illustrated on the RMAC website.



It is understood these inter-relationships, including Government designation of MLA as sole service provider, were set in place in recognition of marketing and R&D capacity and infrastructure within the former AMLC and MRC that merged into MLA, and the initial voluntary basis for processor contributions.

**ii. The AMPC Constitution.** The company members settled a Constitution on 18 May 2007. This provides wide general powers to the AMPC and sets out governance in terms of company structure, operation and board elections.

**iii. The AMPC Funding Deed of Agreement 2007-2010** sets requirements the AMPC must fulfil to access funds collected as levies from red meat processors and the associated matching public support for R&D. These include:

- AMPC must do all things necessary to remain a party to the MOU, and must comply with roles and responsibilities and other obligations under the MOU.
- AMPC must ensure the funds are used only in accord with the Act and Agreement and in a manner consistent with its approved Strategic Plan, Annual Operating Plan, applicable Guidelines, and in a manner that is efficient, effective and ethical.
- AMPC must provide the Government with plans for risk management, fraud control and intellectual property management, each to be reviewed three-yearly, plus Annual reports and six-monthly statements of financial performance and position.

- AMPC must commission a full Performance Review Report each three years.
- AMPC must not engage in or finance Agri-political activity, or provide funds to a body representing meat processors.

**iv. AMPC Strategic Plan 2008-2011.** A new Strategic Plan was submitted to the Minister in 2008 in line with Clause 11 of the 2007-2010 Funding Agreement. The AMPC Strategic R&D programs are discussed in part 4.

Consistent with the Funding Agreement and the AMPC Constitution, AMPC Vision and Mission statements stress working to facilitate sustained success of red meat processing sector participants and of the whole industry against multiple measures, in the context of consumer and community expectations.

#### 1.1 Vision

A sustainable, innovative and internationally competitive Red Meat Processing industry that consistently meets the demands and expectations of customers, consumers and community.

#### 1.2 Mission

The Australian Meat Processor Corporation (AMPC) is a national body representing all processors active in the Red Meat Processing industry. AMPC aims to promote, protect and further the rights and mutual interests of its Members through various activities, including;

- The receipt of funds from the Commonwealth in accordance with the Funding Agreement for the purpose of investing in and financing projects for either the benefit of individual meat processors or the meat industry.
- The promotion of Australian meat in the domestic and international market.
- The improvement of red meat quality.
- The economic, environmental, health, safety and social well-being of the meat processing industry.
- The financing of commercially based research and development.

**v. Annual Operating Plans (AOP)** – submitted to the Minister, program detail.

**vi. Annual Reports** – to members, the Minister and stakeholders.

**The AMPC Board** in 2010 has nine directors with extensive meat processing, trade and feedlotting experience including two with special qualifications. Five directors have served since 2007-2008. The Constitution election process aims to achieve a workable representation of sector groups plus special skills.

During 2008-2009, the AMPC Board met 14 times, and the Audit and Risk Committee met five times. AMPC Board members as well as staff are involved in industry planning, workshops, taskforces and events.

The external auditor is Nexia Court & Co, a national accounting and audit firm.

## 1.2 Income and expenditure summary

---

**Levies paid by red meat industry producers, feedlotter, processors and live export companies provide 75-80% of the funds used by MLA, AMPC and Livecorp for sector and industry development programs.**

MLA Annual Report 2008-2009 income shows levies collected totalling \$98m (producers of grassfed cattle \$59.5m, mutton/goats \$3.9m, lamb \$27.5m; feedlotter grain fed cattle \$7.2m), plus funds from processors (\$10.6m). R&D partnerships (with some processor funds) \$8.3m; other sources \$15m. From Government \$31.4m, of which R&D matching grants were \$30.6m including some \$6m-\$8m to match processor levies collected and used for R&D [refer below].

**The statutory IOC and R&D basis of the meat industry companies is key to this substantial industry effort** [1.2]. The AMPC considers it important that the scale and flow of levy and matching R&D funds in the meat industry is clearly recorded as a foundation for the PC analysis. The PC Issues Paper Table 1, based on data from DAFF, does not appear to present a full picture.

AMPC income and expenditure is broadly as follows.

### i) AMPC Income 2008-2009

- Levies paid by meat processors, collected by DAFF: \$17,863,801
- Interest and other: \$901,442
- R&D matching funds for AMPC-MLA and processing projects: est. \$7-8 m.

In 2008-09, total AMPC contributions to MLA for AMPC-MLA R&D programs, was \$5.38m excluding Plant Initiated Projects (PIPs) [AMPC 2010]. It is understood this would be matched within MLA by \$5.38m in Commonwealth R&D funds. Under current arrangements, all matching funds are received and recorded as income to MLA and credited by MLA to R&D projects.

In addition, \$2-4m of public funds is allocated by MLA to match post-farm gate projects progressed by firms with and by the MLA Donor Company. Some are PIPs through AMPC that utilise reserved funds, other projects include Collaborative Innovation Strategies. AMPC considers this mix of innovation pathways is important [part 4]. The next round of AMPC strategic planning will consider each in terms of attaining and promulgating advances for the sector.

**Overall, AMPC estimates the Federal Government matching funding towards processing sector R&D programs in 2008-09 was \$7-8m, or 22-26% of the \$30.6m Government matching grants income in the MLA Annual Report 2009.**

### ii) AMPC major expenditure items 2008-2009

As R&D programs involve expenditure across years, AMPC cash inputs to MLA differ from the program costs schedule. Since 2007, AMPC has transferred \$10-11m a year to MLA, about half for R&D, half for marketing. In addition, some processor money flows directly to MLA Donor Company as firm inputs through Plant Initiated Projects or Collaborative Innovation Strategies [part 4].



- Cash provided to MLA for R&D programs 2008-2009: \$5.38m
- Cash provided to MLA for marketing programs: \$5.54m
- Plant Initiated Projects (PIPs) managed by AMPC and MLA: \$896,116
- Industry support – AusMeat, MINTRAC, Safemeat: \$757,871.

Figure 3. AMPC income (showing R&D matching funds) and expenditure patterns.

\$ m	AMPC Income		Income (MLA)	Major AMPC expenditures				
	Levies	Interest	Matching R&D grant	to MLA for R&D	to MLA for marketing	PIPs	Industry support	Admin
2009-10 est	16.06	0.99	9.77	5.92	5.68	3.85	0.72	1.43
2008-09	17.86	0.90	6.28	5.38	5.54	0.90	0.76	1.39*
2007-08	14.99	0.94	5.29	4.98	4.97	0.31	1.01	1.27*
2006-07	14.62	0.93	6.67	5.53	4.83	1.14	0.97	1.25*
2005-06	14.33	0.90	6.43	5.05	6.32	1.38	1.22	1.32*

AMPC 2010. Statutory levies commenced 2007-2008. On programs see part 4. \*Excludes abnormal item.

AMPC holds reserves in line with commitments to fund PIPs as a key strategy to build sector focus on R&D, and to smooth funding of programs in variable times. With return of some processing throughput certainty to the industry, AMPC is planning for more R&D, marketing and PIP activity in 2010-2011.

### Setting and collecting levies

Reflecting considerable concern among processors about levy usage, particularly around generic promotion of meat, as part of the meat industry restructure in 1998 the levies set by processors were reduced by vote from levels under AMLC [1.1]. These were initially voluntary and collected by AMPC.

In 2007, as part of the move to a statutory levy, the AMPC Board proposed that rates be raised by 12.5%. This was the first rate increase in processor levies since AMPC was formed, and was supported by industry. The rates at 1 September 2007 are current. In summary:<sup>11</sup>

- Beef - cattle at slaughter: 0.6 of a cent (\$0.006) per kilogram hot carcass weight per head. The levy payable on a 240 kg carcass would be \$1.44.
- At slaughter, sheep 15c a head, Lambs 16 cents a head, Goats 10c a head.

**Vertically integrated processors operate feedlots and some have pastoral properties, so they also pay substantial levies on livestock transactions**, often a number of payments along the chain. The current Transaction Levy is \$5.00 a head for Cattle, both grass fed and grain fed, at each the time of transfer.

## 2. Context – red meat processing sector features

---

### **Red meat production, its processing, manufacture, retail and export is a major Australian industry, important to the economy and vital to regions.**

Red meat industry 'linkages with other parts of the economy are strong and [industry] performance ... has an effect on the national economy'.<sup>12</sup>

In 2007-08, the gross value of cattle produced was more than \$7.4 billion, and for sheep around \$2.2 billion. Meat processing adds \$2 billion of value. Australia is the second largest exporter of beef and sheep meat. Some 65% of beef is exported, 45% of lamb and 80% of mutton. Combined value of beef, lamb and mutton exports in 2007-08 was over \$5.4 billion [ABARE, MLA].

The AMPC focus in this submission is the processing sector, noting its essential supply chain position of transforming live animals to meat in forms suitable for transport and retail consumption in local and export markets. Data and trend analysis on red meat production will be provided by MLA.

**Post the farm gate or saleyard, most meat is owned by processors or traders, not farm producers.** In the main, meat processors buy livestock from farmers. Much of the value-adding and risk-taking occurs on processor or trader accounts, whether meat is destined locally or overseas.

An estimated 200,000 people are employed in Australia's red meat industry. Some 80% of these work along the post-farm supply chain including in retail butcheries. Processors employ hundreds, and some, thousands, of workers including in regional plants with major positive impacts on local economies.<sup>13</sup>

**While essential to the output of Australian red meat industries, the processing sector faces particular challenges** – from variations in flow of animals needed for economies of scale, to cost competitiveness in world markets, to issues in attracting and retaining employees. This is also a highly regulated industry.

'Red meat exporters incur greater costs and more regulatory intervention than other primary product exporters.' *Productivity Commission 2009*<sup>14</sup>

Red meat processing is a 'low margin, high throughput' business. 'Margins are very fine ... then add risk of seasonality, exchange rates etc' [processor, 2010]. The ongoing squeeze on processors is evident in these ABARE statements.

Australian beef exports in total are forecast to fall by almost 8 per cent in 2007-08 to around 900,000 tonnes (shipped weight), largely because of lower Australian beef production. However, the total value [to Australia] of beef exports is forecast to be maintained at around \$4.6 billion because of the higher saleyard prices of cattle. *ABARE Australian commodities 9.2007*

A significant appreciation of the Australian dollar since mid-2009 has weakened the competitiveness of Australian beef in the US market. In the first [seven] months of 2009-10, Australian beef exports fell year on year by 24% to 115 kilotonnes. For 2009-10 as a whole, Australian beef exports to the [US] are forecast to fall by around 15% to 240 kilotonnes. *ABARE 3.2010*

### **Costs and competitiveness need to be assessed in global protein market**

**terms.** The red meat industry, like most Australian foods, must add value to and export large quantities of product into world markets against suppliers that compete strongly on cost and quality – particularly Brazil and the USA.

Growth of the Australian food sector has been strongly export oriented ... A key trend in world food markets is increasing globalisation, driven by large multinational food manufacturers and supermarket chains with ability to source their input requirements from many different countries...

Australia's continued international competitiveness in food products requires ongoing improvements to multi-factor productivity and investment in research and development. *ABARE 2007*<sup>15</sup>

Australia's status as 'disease free' provides a crucial competitive advantage into high-value markets in Japan, USA and Korea. However, the last ten years has seen rising competitive pressure in these and rising markets such as Russia, Indonesia and the Middle East. The price of Australian meat products (reflecting higher cost structures and the stronger Australian dollar), particularly affects sales to South-East Asia, Africa and parts of the Middle East where Australia must compete with South American, Indian and African meat and livestock [ABARE; *MLA Feedback*]. Productivity increases and cost control continue to be vital.

### **The post-farm red meat industry has restructured significantly in two decades.**

Where the 1970s and 1980s were characterised by state-run abattoirs and local slaughterhouses, industrial disputes, retail dominance by butchers, and occasional quality or export problems, today's industry is much changed.

- **The processing sector is now a mature industry with low margins**, demanding tight management on all fronts and considered investment in capital, systems, technologies, skill and capacity development, products and markets.
- **Firms are consolidating and increasing throughput** including by multiple shift operation. In 2006, the top 25 processed 1.7 million tonnes of beef (others, 0.4 mt beef), and 0.3mt of sheepmeat (others 0.25mt). In 2007, five processed 45% of meat, and the top 25 accounted for 79% at 51 locations.<sup>16</sup>
- **There is a diversity of size and product selling arrangements** among processing plants to service widespread and variable markets. Some plants fail each year, although the major rationalisation was during the 1990s with closure of many local council plants in face of upgrade needs, plus some in cities facing environmental issues.
- **The processing sector has experienced a long period of re-investment** – new slaughter floors, boning rooms, upgraded chillers and freezers plus improved effluent and odour management measures. Processors are now faced with the ongoing challenge to make their investments in increased capacity pay off.
- **These investments parallel changes in quality systems implemented by processing firms and through regulation.** The ARMCANZ Australian Standards 1995 provided a start by introducing HACCP systems. Technological, process and quality advances have continued.

The red meat industry recognises the need to be vigilant about all types of costs across operations, at all stages of the supply chain. Costs include direct and indirect regulation expenses and impacts of regulation on innovation.

The cost of livestock is only one component of the total [of] providing fresh meat to consumers ... it represents a relatively small proportion of the final price of packaged meat. ... Movements in the margin between saleyard prices and retail prices for red meat may be caused by...changing costs [along the] chain ('finishing' on grain to meet quality specifications [to] slaughtering, processing, transporting, butchering and packaging) and increased value added at the retail end. *ACCC 2007*<sup>17</sup>

**Capacity for innovative flexibilities in meat processing is limited by regulatory regimes.** In most industries, cost and competition pressures spur firm-by-firm innovation, with individual companies closely guarding their advances. This occurs to an extent in red meat processing but the complex and over-riding regulatory environment works to standardise technologies and processes.

Government regulations, plus industry regimes such as AusMeat, aim to standardise for food safety generally, and for export trade purposes. The policy reasoning for substantial Government regulation is that overall benefits accrue to the Australian economy. But this has other impacts.

Some processors note that operational advances and inventive shop-floor 'new ways', can be held back by current rules and regulator approaches. Regulatory officers use cross-referencing to determine 'usual practice'. It is difficult for one company, even the largest, to progress the frontline 'private sector innovation' that Government schemes encourage in other industries.

**There are rules and procedures for seeking approval for innovative change.** At Federal level, AQIS Meat Notice 2008/01 *Protocol for Alternative Procedures and New Technology Approvals* (current), is a regulatory instrument that must be followed 'where a business proposes an alternative procedure or new technology *differing from currently accepted and approved practices* within the Australian export meat industry'.

The Notice provides for commercial confidentiality. However, the proposed changes are to be assessed by reference to 'accepted' ways, and AQIS also allows for discussions with industry representatives. The prior version of this Meat Notice (2003/03) explained possible reasons for such discussions.<sup>18</sup>

AQIS will consider the application, including the market access implications, and discuss the applications with relevant industry representatives (using a non-confidential summary). The purpose of this discussion is to ensure that applications can be prioritised according to industry need and benefit, and to ensure that all aspects of the application are considered.

**Technology, process or systems changes that have been developed at an industry level and tested across the sector appear to have a faster-track.** As a major processor points out, 'it is very difficult to deal with rules of importing countries – you need a critical mass around the technology; both local and foreign vets tend can just say they like the current way'.

If the sector as a whole (or a group of firms backed by sector R&D funds), develop an initiative, and involve the regulator as they move along, then it is easier for the whole sector to adopt and apply the innovation. This is a key dimension of many AMPC-MLA research or development projects.

An alternative procedure or a technology that has been previously approved by AQIS need not undergo a validation process but may, in consultation with the AQIS on-plant staff, ATM and FOM, proceed directly to an on plant trial (it shall be deemed that validation has been done) subject to any conditions that may be considered appropriate by AQIS. *Meat Notice 2008/01*

Similar steps are required in the Australian Standard meat processing system in which State agencies are the regulators and must approve any proposed changes. For example, industry and matching R&D funds were invested in developing a more efficient hot knife sanitising procedure. This was validated in trials involving regulators. The NSW Food Authority supported across-sector implementation of the accepted system, and was disinclined to alternatives.

The MLA recently published a guide giving a process for sanitising knives using water at less than 82°C. If you wish to use the alternative method described in that guide you must make prior application to the Authority, giving evidence to validate that alternative system, and gain specific approval to use this. *NSW Foodwise Issue 8, Spring 2007*

**This 'standardising reality' favours, even requires, across-sector productivity R&D to achieve technology advances or major systems changes including work practices.** In addition to R&D programs to develop and validate new technologies [examples<sup>19</sup>], the AMPC developed Plant Initiated Projects (PIP) scheme aims to encourage on-plant innovation in single plants or among groups, with findings available to the sector within two years. This wider access can assist progress of the changes through regulatory requirements [4.2]. At plant level, there are signs that operators see R&D as difficult to traverse alone – so for many their focus has had to be workforce cost control.

In spite of...a tradition of innovation [salting, refrigeration, mechanisation, by-products], recent analysts suggest the processing sector could do even better, noting that the industry has become fixated on a single aspect of their business – scraping out productivity gains through reducing fixed labour costs! ... To be sustainable, meat processors must innovate in these areas as well. ... • Maintaining labour supply; • Minimising OH&S risks; • Differentiating product through process automation; • Value adding to create higher margin products; • Improving data capture & communication for supply chain management; • Coping with an old (1900s) meat inspection system in a new high speed processing environment; • Dealing with escalating environmental compliance costs; and • Optimising meat quality in high-throughput plants. *MLA-AMPC PIP Review, 2007.*<sup>20</sup>

**These circumstances need to be considered in assessing appropriate levels of, and balance between, public and private investment in R&D.** The forceful regulation system is in place as a public good (assured food safety is a public benefit, as much as water, biodiversity or climate change R&D). Public benefit was confirmed in 2001 when meat processing regulation was continued after the National Competition Policy *Review of the Export Control Act 1982*. The key NCP test for retaining any regulation was a net public benefit. This public good finding was reiterated by the MIC to the PC *Review of Cost Recovery by Commonwealth Agencies* in 2001.<sup>21</sup>

### 3. Context – national innovation and research objectives

---

'RDCs sit within a broader institutional framework and set of arrangements for funding and undertaking rural R&D' [IP p3]. Rural R&D in turn has a presence within the national innovation system,<sup>22</sup> and must contribute to policy goals.

**Australia's innovation policy framework and Ministerial priorities should inform this Inquiry into rural R&D funding, structures, and achieving national targets.**

**Results should be the key measure not, say, whether all innovation support fits under one incentive scheme.** As the Minister for Innovation, Industry, Science and Research observes, 'many different factors ... influence our innovation performance ... And every sector experiences things in its own way'.<sup>23</sup>

In May 2009, the Minister released the Government's new innovation policy for Australia. The statement, *Powering Ideas: An Innovation Agenda for the 21st Century*, plus specific Budget measures. These responded to advice from the 2008 Review of the National Innovation System, and associated review of the Cooperative Research Centres (CRC) program.

Ministerial statements since have developed, and funded, elements of this Agenda. Through the eyes of the red meat processing sector, and in the context of its operational realities and innovation challenges [parts 1, 2], the following extracts from *Powering Ideas* and other papers are informative:

*Powering Ideas* sets a vision for a national innovation system in 2020 in which:<sup>24</sup>

- The Australian Government clearly articulates its national priorities and aspirations to make best use of resources, drive change and provide benchmarks against which to measure success.
- Universities and research organisations attract the best and brightest minds to conduct world-class research, fuelling the innovation system with new knowledge and ideas.
- **Businesses of all sizes and in all sectors embrace innovation as the pathway to greater competitiveness**, supported by government policies that minimise barriers and maximise opportunities for the commercialisation of new ideas and new technologies.
- Government and community sectors consciously seek to improve policy development and service delivery through innovation.
- **Researchers, businesses and governments work collaboratively to secure value from commercial innovation and to address national and global challenges.**

Associated targets listed on the DIISR website include:

- **doubling the level of collaboration** between Australian businesses, universities and publicly-funded research agencies;
- **a 25 per cent increase in the proportion of businesses engaging in innovation**; and
- **continued improvement in the number of businesses investing in R&D.**



The Minister is now stating policy priorities. These include absolute increase in productivity: *'It is about investing in technology, skills and organisational change to renew our productive capacity and create tomorrow's jobs'*.

Productivity is to be built at national, industry and enterprise levels based on R&D, on all types of innovation, and on collaboration and flow of benefits.

Increasing productivity is the only way we can get all the things we want – better wages for workers, higher returns for investors, and lower prices for consumers. ... Innovation is absolutely critical to increasing the output of the Australian economy. ... Innovation is about coming up with new ideas and making them work. This is the key to generating more value from any given combination of inputs – the key to lifting productivity. *Minister Carr, April 2010*<sup>25</sup>

**A key question then, is how these high-level objectives will be best achieved within any given sector of the economy?** Trying to apply identical innovation and support models to all sectors is unlikely to secure the targets. Similarly, 'appropriate' levels of public and private investment will vary across industries.

Notably, the Minister flagged, and has since established, schemes to provide public support to research and development. Two schemes aim to generally to 'boost business research and deliver better outcomes for the nation', by:<sup>26</sup>

- replacing the R&D Tax Concession with a new, simpler R&D Tax Incentive, and
- Commercialisation Australia plus a set of forms of funding support.

**The new R&D tax incentive scheme is scheduled to commence 1 July 2010.**

It has attracted a deal of comment, including submissions to the Senate review underway. While many agree with the need to reframe aspects of the previous open incentive (R&D tax deduction) arrangements, they also express concern with the marked tightening of the definition of research – making the incentive available only to those prepared to take 'blue sky' risk. As explained by PriceWaterhouseCoopers, the changes include:<sup>27</sup>

A new definition of 'core R&D activities' which does not refer to existing terms such as 'innovation', 'novelty' or 'technical risk'. Under the new definition, 'core R&D activities' ... must be 'experimental activities whose outcome cannot be known or determined in advance' are to be determined by 'applying a systematic progression of work that is based on principles of established science', and are conducted for the purpose of generating new knowledge.

It is interesting that a study from as far as Canada rates this as a positive new tax incentive arrangement, but at the same time confirms it is not a general incentive for in-house R&D. Rather this will be a regime more for particular types of sectors and research businesses, than others.

...from July 1, 2010, [Australia's] deduction-based system is to be replaced with a system of R&D tax credits-45 percent refundable credits for companies with group turnover less than AUD \$20 million, and 40 percent non-refundable credits for large corporations. For many R&D operations, such as spin-offs from larger firms or university research projects, the potentially refundable nature of these tax credits will represent a powerful incentive to structure within the defined revenue limits. *KPMG Canada, May 2010*<sup>28</sup>

### **Commercialisation Australia is the second Government innovation initiative.**

The website explains that Commercialisation Australia will:

- be the primary source of Australian Government assistance for commercialisation.
- take a radically different approach to commercialising Australian research and ideas.
- build the capacity of Australia's talented researchers, entrepreneurs and innovative companies to convert ideas into successful commercial realities and create high-skill, high-wage jobs.
- deliver a new integrated, hands-on approach to take ideas to market through a range of tailored assistance measures for specialist advice (Skills and Knowledge support including a Case Manager and Volunteer Business Mentors), proof of concept and early stage commercialisation.
- receive \$196.1m over the four years to 2013, with ongoing funding of \$82m a year thereafter.
- for those selected, offer up to \$50,000 to pay for specialist advice and services; up to \$200,000 over two years to assist with the recruitment of experienced executives
- offer Proof of Concept grants of \$50,000 to \$250,000 to test the commercial viability of a product, process or service; Early Stage Commercialisation repayable grants of \$250,000 to \$2m to develop a new product, process or service to the stage where it can be taken to market.

Interpreters of the fineprint identify this as a program to assist firms (up to \$10-\$20m turnover) in inventing, making and selling products and technological processes. A first \$9.6m of grants were released in April 2010. Of 21 successful applicants, 7 are developing products or devices for medical use, 7 are developing electronics, detection or communications technologies, 3 are working on software systems. One is for avocado food products enabled by innovative packaging delivery technologies (\$346,480).<sup>29</sup> All of these firms are in it to make a profit. Public benefit is expected to flow as spillovers.

The Productivity Commission has been asked to 'consider the extent to which the agriculture, fisheries and forestry industries differ from other sectors of the economy with regard to research and development'.

**In this, it is important to ask how current levels of research and innovation being stimulated in, say, red meat processing, might be achieved through the new general support schemes for enterprise research and innovation?**

(Noting also these initiatives do not support cross-sector or wider R&D.)

**The short answer is the two schemes offer little, or no, encouragement to research and innovation within red meat processing firms or sector.** For meat processing operations margins are too low for such research risk. And the standardising effects of regulatory regimes also work against such projects.

An overview of research and innovation in the red meat processing sector, spurred by processor levy contributions and matching R&D funds is provided in part 4. Boosting investment in meat processing R&D is discussed in part 5.



## 4. Processor innovation and AMPC R&D programs

---

'Innovation occurs from the shopfloor to the boardroom', *Senator Carr, The Australian 19.12.2007*

Australia's red meat processing sector includes a range of enterprises, from multinational companies to family-based enterprises, vertically integrated groups to small operations.<sup>30</sup> They all work under regulatory systems that require levels of uniformity in processes and of products [part 2].

### **Competitive firms undertake forms of in-house innovation. All contribute to sector and industry R&D funded by levies and matching Government grants.**

A range of entities have company research and development underway, with aspects linked to AMPC programs. In developing this input to the PC Inquiry, the AMPC has endeavoured to collate material to illustrate patterns of innovation, research and industry R&D within meat processing plants.

#### 4.1 Processor innovation and research – case studies

---

All forms and levels of innovation are evident today in the processing sector.

**Company A.** This family-owned multi-species meat processing, exporting and trading company employs 1,400 in its feedlots, processing plants and tannery operations. In recent years, Company A has expanded processing throughput some 30% using purchased new technologies and systems that have enabled, for instance, second shifts.

Company executives are conscious 'the processing sector will encounter tough times as the flock rebuilds and there is no doubt that the industry is going through structural change at the moment'. With a positive outlook, the company is lifting its investment in technological improvement including some in-house applied research. Company A plants use a range of cutting-edge technologies such as loin, leg and trunk boning machines, Cryovac, and gas-flushing machines, plus state-of-the-art beef patty, rissole and sausage production lines.

In April 2010, Company A opened new state-of-the-art lamb and mutton boning facilities meeting all hygiene and safety standards and aiming to be one of the largest most efficient meat processing facilities. A sign of modern workplace times, the new facilities are ergonomically designed to take out most of the heavy lifting, and provide opportunities for employing school leavers and women including mothers on flexible times. In outline, Company A:

- undertakes internal innovation backed by substantial investment, eg. ergonomic work design and equipment, new employment modes, ongoing refinement of HACCP food safety systems.
- progresses in-house research to achieve advances in animal care, processing at all stages, products and procedures. R&D includes testing, adapting and applying commercial inventions as well as industry funded collective research eg. outcomes of AMPC/ MLA work on cost efficiency and productivity in plants, and procedures such as hot-boning with AQIS approval.<sup>31</sup> They have claimed the R&D tax concession, but 'we don't /can't plan work just to get a tax deduction'.
- pays levies, participates in the industry and undertakes PIPs ('the three year time limit on PIP money is an incentive to get moving'). They use PIPs to address local problems. They test and apply findings of sector, industry and national R&D programs ranging from AMPC-MLA 'development of innovative meat inspection models' to the DEWHA Greenhouse Challenge Plus.

**Company B.** A family-owned enterprise in a regional location. Has built over five decades to employ 290 people in beef feedlotting, processing, local supply and export. Company B aims for state-of-the-art production and processing operations and pursues world best practice ideals towards providing customers with great beef.

Thinking outside the square, Directors have invested, in the view of some, 'a fortune' over decades towards development of streamlined processing, quality, food safety management, and work organisation systems to increase competitiveness in key export markets. Although not supported initially by the sector, this enterprise persevered and eventually achieved regulatory and sector support needed to take the new ways to regulators in major countries. The innovation, research and leadership has been recognised by industry awards.

- much of this ongoing effort would be categorised as company-funded transforming innovation; and the company also undertakes PIPs at times through AMPC, a good way to leverage funds.
- 'We need more PIP projects, on bigger issues like emissions ... research and test in your plant then after two years it is published for all to understand'.
- a proportion of this development would be in-house research under former tax R&D criteria. The company has made occasional R&D tax claims – likely less under the new scheme.
- Company B also pays levies to DAFF to be passed to AMPC for sector and industry programs, and is a strong supporter of industry programs and AMPC's evolving capacity.

**Company C.** This major beef feedlot and multi-species processor is part of an international family-based company. It buys cattle mainly, and sheep from across the country, and employs thousands of workers in feed-lots and plants in eastern Australia. It exports to over 100 countries. Company C has expanded through mergers and acquisitions to achieve economies of scale it sees as vital for Australian product competitiveness across world markets. It markets from Australia under known brands. Company C pays substantial levies to AMPC (processing) and MLA (production).

The company organises its processing plants and associated systems to harness its workforce capacities. Innovation is a constant with major upgrades, at times \$50m investments, to install the most modern technology to ensure maximum efficiency and consistent quality of product.

- This Company continuously implements available new technologies to increase yield capacity. It also innovates and takes a lead in work systems, such as Enterprise Bargaining Agreements, and achieving environmental licences.
- Company C runs a substantial internal R&D program including a Collaborative Innovation Strategy with MLA that attracts matching research funds for complying activities. On-site R&D includes adapting and applying technologies and systems developed by commercial firms worldwide and through industry R&D in Australia to address local issues, markets and regulations.
- The former tax concession was accessed, but 'people don't spend money for tax deductions'.
- Across-industry issues in Australia, as in other countries, arising from climatic (eg. water distribution), social (eg. decline in industry skills) and national regimes (eg. biosecurity) are beyond the purview of even the largest firms alone. This company pays substantial levies to support, with matching public grants, industry R&D that works to address these challenges.

**Company D.** Also employing thousands and exporting worldwide, this vertically integrated, family-owned business operates processing facilities, feedlots and tanneries across States.

Company D emphasises innovation and applied R&D. Company technical experts initiate and apply state-of-the-art technology for production facilities and equally innovate in operational methods and systems to enable staff to work to their potential. Food safety is an imperative from production through processing to product consumption, as across the industry. The company has received industry awards for its innovations.

- Investment in modern and efficient beef plants is ongoing including associated best practice initiatives to minimise impact on the environment.
- Company D conducts in-house research particularly on new and applied processing and environmental technologies including through a Collaborative Innovations strategy with MLA.
- As with many other plants, it offers facilities as test sites for all types of R&D and workshops.
- This company also pays substantial levies to support industry collective programs, both to AMPC (processing slaughter levy) and to MLA (production/transaction levy).

**Annual AMPC-MLA Processing Innovation Awards also publicise innovative and commercial solutions to industry challenges being developed by firms – often spurred by levy-based R&D programs.** These initiatives have been progressed by processors, guided by industry expertise, as research within the scope of usual business operations. A number build on or contribute to outcomes of wider industry research programs undertaken by AMPC/MLA.

PI Award winners come from a cross-section of red meat processors:

- 2009. Teys Bros, Beenleigh QLD -- 'Modular Filtration Unit'
- 2009. Peel Valley Exporters, Armidale NSW -- 'MAR install cutting edge robotics to bring a new level of efficiency, workplace safety & hygiene to the carcass dressing process'
- 2009. Northern Co-Operative Meat Co, Casino NSW – 'Cobotic Boning System'
- 2008. Teys Bros – 'Development of manual assist co-biotics devices'
- 2008. Oakey Abattoir – 'Recycling of process water for cattle wash'
- 2007. Norvic Meats – 'Web based auditing project'
- 2007. CRF (Colac) Pty Ltd, Colac VIC – 'Elevated automated skins conveyor'
- 2007. Hardwicks Meat Works PL, Kyneton VIC – 'Wastewater treatment plant'
- 2006. Fletcher International Exports, WA – 'Plastic Slip Loading Pallets'.

**Industry-driven collective R&D, funded by company-paid levies and Federal matching grants, provides the vital framework to this innovation and research momentum** [4.2]. Copies of reports with further cases can be provided.

## 4.2 AMPC programs – research, development, extension

**In the red meat processing sector, innovation and the sharing of advances have grown substantially with outcomes of AMPC funded RD&E programs.** The purpose and scope of these programs are set out in the AMPC Strategic Plan, with actions and funding allocated in each AMPC Annual Operating Plan.

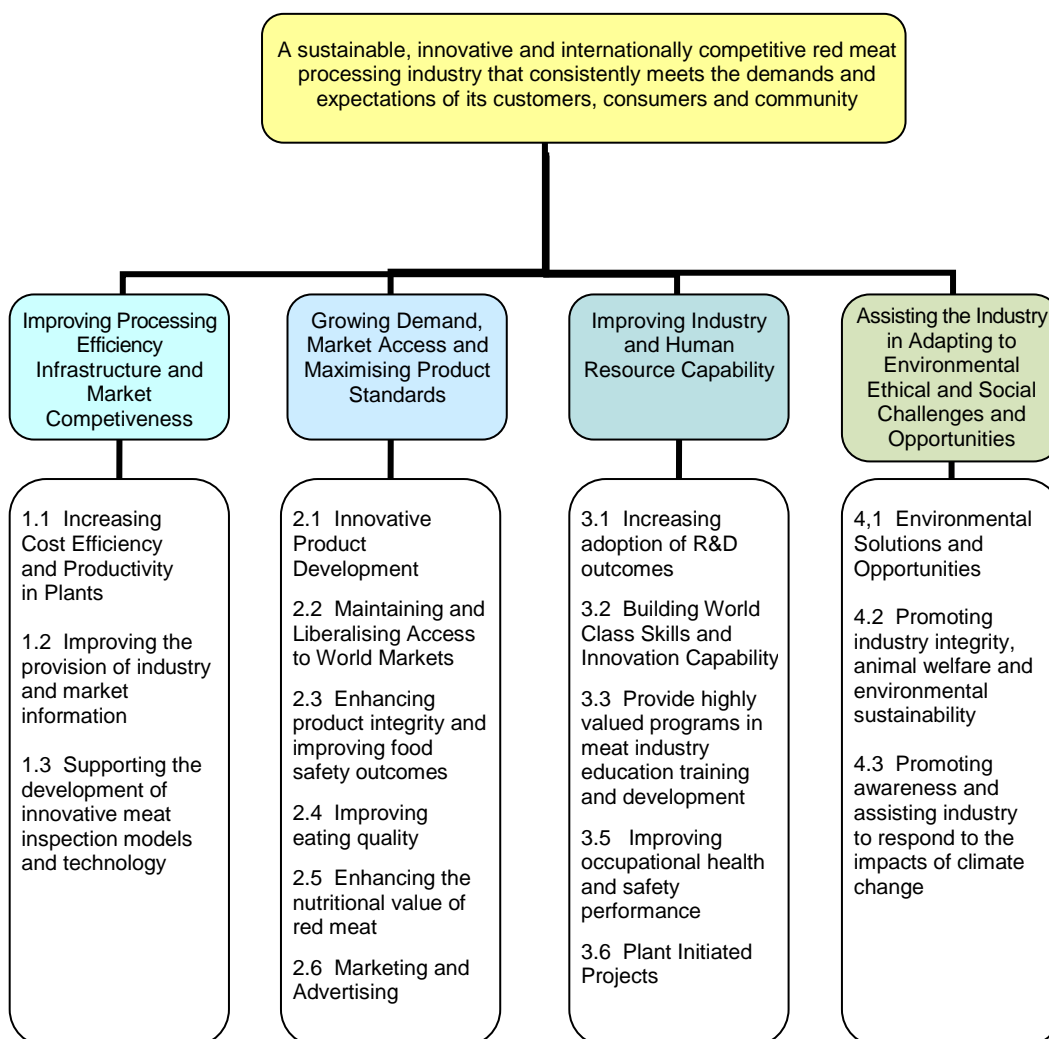
**The AMPC has four overarching strategic priorities: Efficiency, Demand and Products, Capability, and Sustainable processing environment** [Figure 4].

AMPC priorities align with the MISP, and Ministerial and national priorities [4.3].

The AMPC focus is on facilitating a sustainable, innovative, efficient and competitive red meat processing sector, however this is always in the context of the whole industry contributing to Australia socially and economically [part 2].

Processing efficiency adds to the competitiveness of entire supply chain, and to returns to producers and local communities, as much as companies.

Figure 4. AMPC Strategic Plan 2008-2011 – priorities and programs



The AMPC Annual Operating Plan each year sets out partner arrangements plus performance expectations for each Strategic Priority and its programs, as well as funding commitments for the next years of the Strategic Plan.

Figure 5. AMPC Operating Plan 2009-2010 – program investment

STRATEGIC PRIORITY	PROGRAM	R&D / Mktg *	AMPC \$ 2008-09	AMPC \$ 2009-10	Partners	Program Total \$ 2009-10
Improving Processing Efficiency Infrastructure and Market Competitiveness	1.1 Increasing Cost Efficiency and Productivity in Plants	R&D	\$956,000	\$956,000	MLA SheepCRC companies	\$2,090,000
	1.2 Improving provision of industry/market information	Mktg	\$246,000	\$246,000	MLA	\$3,858,000
	1.3 Supporting development of innovative meat inspection models and technology	R&D		\$561,000	MLA plus companies agencies	\$1,075,000
Growing Demand, Market Access and Maximising Product Standards	2.1 Innovative Product Development	R&D Mktg	\$380,000	\$330,00	MLA companies	\$1,562,000
	2.2 Maintaining & Liberalising Access to World Markets	Mktg	\$1,898,833	\$1,932,000	AMIC MLA	\$4,180,000
	2.3 Enhancing product integrity and improving food safety outcomes	Mktg R&D	\$3,668,000	\$3,368,000	AMIC MLA AHA	\$12,717,000
	2.4 Improving eating quality	R&D Mktg	\$260,000	\$220,000	MLA	\$3,176,000
	2.5 Enhancing the nutritional value of red meat	R&D Mktg	\$848,000	\$848,000	MLA	\$7,815,000
	2.6 Marketing & Advertising	Mktg	\$1,346,000	\$1,156,000	MLA	\$16,644,000
Improving Industry and Human Resource capability	3.1 Increasing adoption of R&D outcomes	R&D	\$586,000	\$586,000	MLA	\$5,607,000
	3.2 Building World Class Skills & Innovation Capability	R&D	\$458,000	\$458,000	MLA AMIC	\$2,245,000
	3.3 Provide highly valued programs - industry education training and development	R&D	\$1,245,000	\$958,000	MLA MINTRAC	\$2,810,000
	3.4 Improving occupational health & safety performance	R&D	\$269,000	\$269,000	MLA	\$539,000
	3.5 Plant initiated projects	R&D	\$ 451,372	\$2,742,446	MLA companies	\$8,227,338
Assisting the Industry in Adapting to Environmental, Ethical and Social Challenges and Opportunities	4.1 Environmental Solutions and Opportunities	R&D	\$270,500	\$270,500	MLA EnvBioCRC	\$541,000
	4.2 Promoting industry integrity, animal welfare and environmental sustainability	R&D Mktg	\$124,000	\$104,000	MLA	\$1,980,000
	4.3 Promoting awareness and assisting industry to respond to impacts of climate change	R&D	\$372,456	\$1,014,461	AMIC MLA	\$1,939,922

\* R&D projects are those meeting criteria for Federal matching R&D funds. These funds are counted into Program Total \$. Other projects are grouped as 'Marketing'.

**Funds collected through the levy on processors and matched by Federal R&D payments are leveraged for the sector, industry and wider economy.**

Programs range from research as part of industry-wide efforts (2.3 Product integrity and Food Safety, also 2.5. Nutrition, 4.1 Environmental), to specific research on processing efficiency (1.1), and R&D initiated and based at various plants, then publicised (3.5 PIPs). Advances in technologies and systems become available to be shared across the sector. Regulation of processing means approvals are required for all types of innovations [part 2]. Sector-wide progress is assisted by involving regulatory authorities at all stages.

Active processor-researcher partnerships are facilitated through programs that utilise levy and matching funds in a number of ways. These include:

- **Processor involvement in R&D projects.** A substantial number of processors open their plants for both developmental R&D and later stage test trials.

**Robotic Front Hock Cut, Hind Cut & Neck tipping system.** This Industry project is to be completed May 2010. When completed, it will be the first fully automated system in the sheep industry to cut hocks and tip necks. Peel Valley Exporters already has 3 robots running, all of them the first in their class. This project will add two more, and together with another project also underway (Kidney fat removal), will automate 6 positions on the kill floor making Peel Valley's, Tamworth sheep slaughter room the most automated in the world. The project has had 96%-98% successful cut rate, swinging carcasses or animals that are still moving being the main cause of missed cuts. Fine tuning of the vision and robot will overcome missed carcasses. Easily able to achieve cycle time including sterilizing between each carcass which manually is not always achievable. *AMPC Annual Report 2009*

**Electrical stimulation of lamb carcasses for tenderness and yield.** The CRC for Sheep Industry Innovation supported by AMPC-MLA funding is well-advanced on this project to improve the pH-temperature compliance and reduce the incidence of cold shortening in lamb carcasses. The trials utilise lambs from CRC Information Nucleus flocks and working with a number of AMPC member plants including CRF Colac Victoria and WAMMCO in WA. Findings will be applicable to the wider industry to upgrade and maintain the eating quality status of sheep meat. *AMPC Annual Report 2009*

- **Partners in Innovation.** General information on these programs is available from the AMPC-MLA *Red Meat Innovation* website [[www.redmeatinnovation.com.au](http://www.redmeatinnovation.com.au)].
- The Partners program is a proactive mechanism for attracting investment from enterprises in the industry. Matching R&D funds further encourage participation. Firms are supported to meet development needs and to generate knowledge that will be spread in multiple ways, including by:
  - increasing the number of successful commercialised innovations available to the red meat industry (and spreading to other sectors)
  - building the capacity of companies in the red meat industry, and their employees, to establish innovation as a core business strategy
  - demonstrating to the wider industry the commercial benefits achieved from investment in innovation.



**Case study – RTL manual assist beef puller.** With funding from AMPC and MLA Donor Company, the Northern Co Operative Meat Company Ltd with a NZ-Australian technology (Robotic Technologies Limited) have developed an innovative manual assist boning machine.

Research identified two of the most strenuous tasks in the boning room are removal of the knuckle bone and the aitch bone. Boners who regularly perform these suffer significantly more injuries, often having to leave the industry in their early forties. Yield studies also revealed valuable product was being lost as boners become more fatigued over an eight hour shift. Low margins and the difficulty replacing these skilled workers meant this had to be addressed.

Developing a manual assist device was the preferred approach. Boners are highly skilled and it would be difficult to apply a full automation solution (a robot taking the place of human operators). The new beef boning unit is designed to make boning less physically demanding. A mechanical arm acts to provide the pulling force and speed to aid the operator while still providing a high level of control. This enables the operator to focus on their core skill of achieving cutting line accuracy.

The beef boning unit has had a major impact on improving yield while reducing strain and effort required of boners. Independent cost/benefit studies at several processing plants have shown an increased net profit of between \$3.50 to \$4.65 per carcass. In addition to yield benefits and reduced worker injuries, processors have found they can now attract a much broader pool of labour to perform these tasks, beyond young, big, strong males. This low cost, relatively simple technology is now available to the whole industry and commercial installations are underway at several other processing companies. *MLA 2010 abridged.*

- **Collaborative Innovation Strategies.** Under CIS arrangements, processors (and some from other sectors) identify their interest in a partnership with MLA to build enterprise innovation capacity through a range of projects and linking activities that are integrated into the company's business plan. CIS aim to build innovation and R&D adoption capability across the sector. Each CIS works to advance an enterprise from 'operational' to 'innovative'.

Innovation capability requires both a structured and disciplined approach to managing innovation ('innovation hardware') combined with flexibility and tolerance for complexity and chaotic, unpredictable events ('innovation software'). *CIS brochure, 2010*

A number of firms have CIS operating and the CIS program is generally available on application. Research-based activities often utilise PIP funds then matching R&D funds as incentives to further company cash input. Each CIS includes measurable performance indicators to identify how innovation activities have contributed to the bottom line and achieved business objectives.

Each Collaborative Innovation Strategy is expected to contribute to the enterprise long-term profitability, competitiveness and sustainability', and this has clear flow on benefits to community and economy. In addition, knowledge from particular projects is extended in a range of ways, and overall industry innovation capacity should substantially increase. Wider benefits include encouraging more professionals into meat processing.

**Collaborative Innovation Strategy at Teys Bros, Brisbane.** Under the CIS, as part of building ongoing innovation capability for the company, and by flow on of people and knowledge, the industry, Teys Bros has undertaken multiple projects with productivity, OH&S and environmental objectives. These include: Beef Pullers to assist boners in removal of the aitch bone and knuckle, high physical demand tasks, and of benefit industry wide; the Modular Biofilter to isolate and treat odour emissions (an open day has been hosted by Teys). *Feedback 3.2010*

- **Plant Initiated Projects (PIPs).** The AMPC Board agreed in 1999 to develop the PIP scheme. AMPC and MLA worked closely to develop a formula for the management of the process between AMPC and MLA. As a distinctive partnership program, PIPs are a key element of the AMPC *Improving Industry and Human Resource Capability* strategic priority.

To reinforce focus on productivity innovation, the AMPC committed to each member that 15% of their levies will be reserved for three years, for use as part of approved R&D activities initiated by the plant. Companies must match AMPC PIP funds at least dollar for dollar. MLA then adds up to 50% from the government R&D funding MLA holds. There have been 62 PIP projects to date. The number is rising with higher fund allocation and usage. Over 2001-04, the majority of PIP projects were engineering-led, such as better hooks, better dryers, safer machinery. This reflected plant needs and industry R&D priorities. PIPs are expanding toward more complex plant issues including work and environmental systems.

'Plants that were once hesitant to try out a new technology or process, now invest because they can share the risk with other industry parties – either as a consortium of processors, or as a single processor sharing with AMPC and the government. This has led to unparalleled investment and a process [for] fast track[ing] technology transfer to 'research-ready' plants.'

*MLA PIP report 2001-2004*

A win-win attraction of PIPs is that processors can identify and undertake R&D projects with relevance to their own plants and with potential to also deliver benefits to the wider sector and beyond. PIP funds may also be aggregated for projects by groups of members. AMPC Guidelines explain:

The funding eligibility of specific project applications are assessed by AMPC (and where applicable MLA) against a variety of criteria which are primarily aimed at achieving the following:

- Encouraging and fostering new ideas, technologies and innovation within the Australian red meat processing sector through to commercialisation and industry uptake.
- Undertaking R&D programs, projects and activities which align to AMPC strategic priorities, comply with requirements of the Statutory Funding Agreement (SFA) and provide benefit to the Australian red meat processing sector.
- Ensuring that the Australian red meat processing sector continues to maintain and enhance its, industry competitiveness and profitability and benefit from the astute investment of resources provided by processors to collectively develop and strengthen their industry.

PIPs are an important step in AMPC pathways to stimulate R&D, innovation and uptake, sector-wide. The following technologies, for example, had their genesis in the core industry technology program (AMPC-MLA financed by levies and matching public funds) and migrated through the PIP program for industry prototype trialling and assisted adoption (company funding, AMPC levies, matching funds) and on to commercialisation under AMPC-MLA terms.

- **Automated SaniVac** machine developed by Machine Automation and Robotics Pty Ltd with MLA; two types - Fore Leg and Rear Leg SaniVac. These machines wash, suck and steam the front and sides of the foreleg and rearleg and remove any contaminant material. The action is the same each time, in place of the variability of a person at each operation



point. These were trialled, refined and training developed through a PIP at Peel Valley Processors, Tamworth. A 2009 evaluation identified installation of either a Fore or Rear Leg SaniVac automated system as an excellent investment, with positive financial, work flow and OH&S returns.

- **RTL Manual Assist Beef Boning Unit** developed in conjunction with Northern Co-Operative Meat Company Ltd and other key industry partners. Starting with a concept design for a manual assist boning machine and with R&D funding to enable progress, the team has delivered to industry a low cost and relatively simple manual assist beef boning machine to assist boners in existing boning rooms to remove various leg cuts from the carcass. The system has been commercialised with a number of installations in place in Australia and New Zealand. The evaluation in 2009 found strong returns on costs, through higher yields and throughput, OH&S advantages, a wider pool of workers able to do skilled boning work, and less staff turnover.

For each PIP, a report is required and results can be published by AMPC-MLA after two years. Spread of learnings about environmental performance is key.

**Greenhouse Gas Challenge PIPs.** AMPC was a member of the Greenhouse Challenge Program from 2001. AMPC has assisted groups of members to progressively reduce their net emission of greenhouse gases as well as addressing a range of other environmental management issues both immediate and long term. For example, [at one site, a new] biogas cogeneration plant, using renewable methane from their own wastewater treatment pond in a first for the meat industry in Australia. [The firm] also secured a \$700K grant from the NSW Government as part of the Energy Saving Fund to make this project economically viable. This technology enables substantial greenhouse gas emissions as it converts methane to electricity, offsets coal-fired electricity consumption and reduces boiler natural gas consumption. *AMPC Annual Report 2008*

**Eversons Food Processors, Frederickton NSW.** In 2009, through the PIP program, AMPC assisted Eversons Food Processors and Macleay River Protein to develop a comprehensive strategic business and environment plan. The two Eversons companies undertook a Management Diagnostic. With the assistance of the NSW Department of Environment and Climate Change and dollar for dollar funding from AMPC, the Eversons Environment Team collected base line data on their water, power and fuel usage, emissions, waste and recycling. The ongoing results will form the basis of their Strategic Business and Environment Plan which will allow setting of realistic goals to improve business, resources and waste management in preparation for the Federal Emissions Trading Scheme. This assists Eversons' compliance with regulations, lowering of costs, improved productivity, and the maintenance of their relationship with their neighbours, the environment and the broader community. *AMPC Annual Report 2009*

The PIP program was evaluated in 2006. This report provides further examples of operational on-site PIPs that are achieving results for the sector [project list <sup>32</sup>]. These have associated, flow-on socio-economic benefits in terms of:

- higher productivity, efficiency and competitiveness including for export
- worker training and building capacity as well as health for longer work
- environmental enhancement and safeguards, and
- overall meat processing sector capability to continue operation, and
- innovation in face of potential challenges in the future.

**Alongside AMPC investment in industry and processor R&D, boosted by public matching funds, and processor cash, the AMPC on behalf of members, also invests \$6-7million a year in marketing plus industry services.** In 2008-09, \$5.5m was provided to MLA for improving industry and market information, innovative product development, marketing, advertising, and promoting industry integrity.

Industry services include contributions to AusMeat, the jointly owned AMPC and MLA service company that establishes and maintains National Industry Standards for Meat Production and Processing [[www.ausmeat.com.au](http://www.ausmeat.com.au)].

**AMPC has an active steering and funding role in its associated organisation MINTRAC, considered an industry success story by many.** MINTRAC (National Meat Industry Training Advisory Council Limited - [mintrac.com.au](http://mintrac.com.au)) is funded for its operational activities through the AMPC utilising processor levies.

Under AMPC priority 3.3 *Provide highly valued programs - industry education training and development*, AMPC gives MINTRAC \$150,000pa in industry service funding, and MINTRAC undertakes about \$1m of R&D projects with AMPC and matching R&D funds via MLA.<sup>33</sup> MINTRAC also wins funding for projects from AgriFood Skills Australia, State Training Authorities and DEEWR. MINTRAC develops and reviews the Meat Industry Training Package, supports implementation of structured training to develop expertise and manage skills at firm and industry levels, and develops professional training programs.

MINTRAC. One of the major achievements [was] continued development of closer ties with meat companies, industry peak bodies, State and Federal Training Authorities, regulators and other industry bodies. The networks (Training Managers, Meat Inspection and Quality Assurance, and Environment) continue to gain popularity as important forums for industry, regulators and researchers to come together and discuss and debate current issues. A range of MINTRAC projects addressed the area of quality of training delivery through initiatives such as trainer professional development programs, ... training and induction requirements of non-English speaking workers, and ... upgrading ... MINTRAC products. *AMPC Annual Report 2008*.

MINTRAC reaches back to the 1990s and increased focus on the need for national training for meat processing and preparation workers. The initiative was developed by the then Meat Research Corporation [part 1] working with processors and unions in particular. On formation on MLA and AMPC, the direction of processor funding to MINTRAC comes from AMPC. An evaluation in 2006 of R&D projects undertaken by MINTRAC identified multiple benefits:<sup>34</sup>

At the industry level ... MINTRAC training has provided direct and indirect economic benefit to the industry. Direct benefit alone has conservatively been estimated at \$300m during the period. Second it has contributed toward reduced IR disputation, enormously enhanced compliance capability, improved adoption of innovation, increased adaptability and improved professionalism across the industry, all features deemed to be significant, by early industry government enquiries, in improving the sustainability of the industry.... enterprises benefit not only from the technical training enabling a quality product but also the non-technical [management] training. ... industrial disputation is dramatically reduced; OH&S, plant flexibility, QWL and ability to meet compliance are all markedly improved. ...benefits to individuals include: enhanced credibility as a valuable element of the industry; improved QWL; reduced safety and health risk, ... and improved employability within and outside the industry.

### 4.3 Alignment with Priorities – and Performance Evaluation

As the PC states [IP p4], 'to help ensure that the RDCs are accountable to the Government and other stakeholders, there is a governance regime that:

- is designed to translate the Government's national research priorities and the associated rural research priorities, together with those of industry levy payers, into five year strategic plans and annual operating plans
- provides for after-the-event annual reporting on outcomes and performance.'

**Each AMPC Annual Operating Plan is designed to deliver outcomes toward achieving priorities in the AMPC Strategic Plan. These in turn align with:**

- priorities of the Meat Industry Strategic Plan (MISP)
- the Federal Government National Research Priorities, and
- the Minister's Rural R&D Priorities.

**The National Research Priorities released by the Federal Government in 2002, include four overarching objectives and a series of explanatory statements.**

In this context, the Minister issues national Rural R&D priorities, and the industry develops the Meat Industry Strategic Plan (MISP). Current MLA and AMPC Strategic Plans are based on 2007 Ministerial priorities and the MISP 2004-2009. These are summarised in the MLA Strategic Plan 2007-2011, as follows:

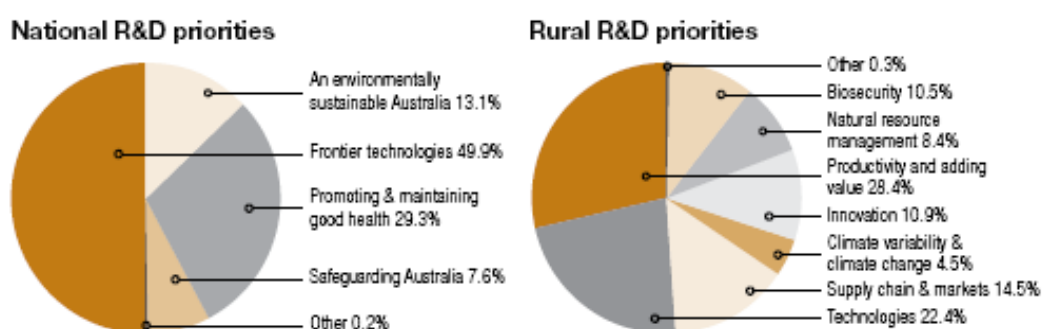
<b>National Research Priorities</b>	<b>Australian Rural R&amp;D Priorities</b>	<b>Meat and Livestock Industry Strategic Imperatives</b>
1. An environmentally sustainable Australia 2. Promoting and maintaining good health 3. Frontier technologies for building and transforming Australian industries 4. Safeguarding Australia. <i>Commonwealth Government 2002</i>	1. Productivity and adding value 2. Supply chain and markets 3. Natural resource management 4. Climate variability and climate change 5. Biosecurity <i>Supporting the priorities</i> 1. Innovation skills 2. Technology  <i>Minister for Agriculture, Fisheries and Forestry, 2007</i>	1. Markets and consumers: creating access advantages, superior marketing programs and value added products 2. Supply chain: addressing community concerns and whole-of-chain efficiencies 3. Product: focusing on food safety and eating quality  <i>Meat Industry Strategic Plan 2004- 2009</i>

MLA is the designated Service Provider to the red meat industry under the MOU [part 1], so most AMPC expenditure is as co-investment with MLA on core programs in marketing and R&D, and joint industry activities. The full width of industry programs are shown in the MLA Strategic Plan.

AMPC is involved in the industry strategic planning that sets overall direction. The AMPC is responsible for ensuring processor levy funds are appropriately utilised in programs and that they directly benefit the processing sector in its wider economic context.

**As researchers in all fields would point out, priorities are not expected to apply equally to every industry, sector or research program.** For instance, 'frontier technologies for building and transforming Australian industries' will receive greater emphasis in some research arenas. Others may necessarily see all their efforts dedicated to 'promoting and maintaining good health'.

A broad research program such as that set out in the MLA Strategic Plan will likely be expected to demonstrate contribution across all priorities. The MLA Annual Report 2009 illustrates meat industry R&D alignment as follows:



AMPC-processor funding contributes to research in most of these. Within the Rural R&D priorities, AMPC investment is particularly towards Productivity and Adding Value, Innovation, Supply Chain and Markets, and Technologies.

Notably, the Minister for Agriculture, Fisheries and Forestry wrote to RDCs in February advising a 2010 set of Rural R&D priorities. The Minister reinforced that RDCs should 'address both industry and government priorities in their 2010-11 annual operating plans'. The Minister has clear views on rising priorities:

The challenges of **climate change and pressures on global food security** mean that the future work of the RDCs will be critical to the continued growth of the agriculture, fisheries and forestry industries. Added emphasis will need to be placed on **achieving productivity growth in the sector**. This will require **greater coordination among RDCs** and a willingness to increase investment in critical issues such as **climate change adaptation and mitigation, water management, food security and biosecurity**. *Ministerial letter, 9 Feb 2010*

A stronger emphasis on broader issues flows through the Minister's list of ten priorities in 2010 – notably though with productivity improvement at the forefront, consistent with the Federal Government's productivity agenda:

**productivity improvement** — to generate new knowledge, which will lead to improved technology that will be adopted by producers to increase productivity

**climate change** — to reduce greenhouse gas emissions and improve soil management, and assist producers to adapt and change farming practices whilst boosting productivity

**sustainable environmental resource management** — to build and share our knowledge to ensure our soils, water and vegetation are managed properly and invasive pests are controlled

**maintaining and improving international market access opportunities** – through work to combat pests and diseases that can potentially be obstructive to trade and to guide production decisions in accordance with the requirements of consumers

**value chain effectiveness and efficiency** – investment in [R&D] must extend beyond the farm gate to ensure the whole value chain is able to operate at optimum levels

**biosecurity** – maintain our research capability to prevent and deal with disease outbreaks, particularly as such biosecurity threats are expected to become more prevalent with climate change

**workforce, skills, education** – RDCs should be taking a strong role in educating future scientists, improving the knowledge and skills of producers and encouraging people to work in the sector

**diversity** – the RDCs should take on a greater role in building strong leadership capacity in the sector and encourage a diversity of people in primary industries, including a greater role for Indigenous Australians, women and young people

**collaboration** – the National Primary Industries Research, Development and Extension Framework has progressed well to date, but it is important to maintain the momentum. ...

**evaluation** – RDCs should support the current joint RDC evaluation process, to demonstrate returns on investment and guide future investment decisions.

AMPC key programs already fit well with the 2010 Rural R&D priorities and with those in the new *Meat Industry Strategic Plan 2010-2015*. The AMPC Board intends to finetune alignment with these priorities during its 2011 planning.

#### **AMPC Review of Performance 2007-2010**

The statutory requirement for triennial reviews of AMPC performance dates from 2007 with the move to mandatory levy collection. The first AMPC Review was completed by in June 2010. The Statutory Funding Agreement requires the review to take into account: performance of the AMPC in meeting its obligations under the Agreement; implementation of the company's annual operating and strategic plans and the effectiveness of AMPC in meeting the targets and budgets set out in those plans; and the delivery of the benefits to the industry foreshadowed by those plans.

Key points from the Arche Consulting review report *include*:

- AMPC is aware of the Company's roles and responsibilities under the Meat Industry MoU and have positioned themselves as a service company working for the benefit of the industry.
- AMPC has met the requirements of the Statutory Funding Agreement to develop Strategic, Annual Operating, IP, Fraud and Risk Management Plans. Industry stakeholders have been involved in the identification of priorities for investment, though processes for stakeholder involvement in strategy setting have not been comprehensively formalised. These involvement processes are improving.
- AMPC has the support of its members and Peak Council. Industry stakeholders are satisfied with AMPC's structure, and consider the structure to be highly efficient.
- AMPC has a board of directors that represents a cross section of the industry, and has a mix of skills relevant to the company. The board has established a charter to guide its operations.
- AMPC financial and project management systems both electronic and physical, are adequate for the size of the business and well understood and used by staff.
- AMPC has implemented processes to collate relevant and appropriate information to measure, evaluate and report on performance. The company has not yet conducted independent evaluations of all of its past investments.
- The investment that AMPC have undertaken is generally viewed favourably by levy payers. The active involvement of the members with investment decisions of the Company provides an opportunity for projects to be selected based on their relevance and expected value.

The AMPC board is reviewing and will be acting on a series of useful recommendations [see also 6.3].



## Program and Project Evaluations

**Systematic evaluation of R&D investment outcomes and returns is receiving increasing emphasis** across RDCs and within the industry, building on long-established for assessing projects before and during funding. The PC seeks input on outcomes of evaluations to date and responses to these [IP p21]. To date, reviews have been mainly organised by MLA as industry service provider.

An independent program evaluation framework plays a vital role in strengthening the capability of the industry to generate strategic plans and also provides a context for reporting on MLA's performance. A work schedule of planned, rigorous, and transparent program evaluation increases industry confidence in MLA's capacity to deliver outcomes and appropriately invest industry and government funds. *www.mla.com.au – Evaluation 5.2010*

MLA has a robust review schedule covering 15 programs from 2007 to 2010. Completed reviews for areas involving AMPC include: Enhancing Product Integrity; Market access; Improving Eating Quality, and Enhancing nutritional reputation of red meat. Forthcoming evaluations include: Developing new products, and Promoting industry integrity.

**In the main, returns on investment from R&D programs, and most projects, are impressive from industry and national benefit perspectives** – and potentially for individual businesses on farm and along the industry chain. For instance:

MLA's Food Safety program has provided a strong scientific foundation for the refrigeration index – a mandatory tool for beef, sheepmeat, pig meat and goatmeat export processors that measures refrigeration effectiveness. An independent review by CIE revealed that a \$3.8 million investment in predictive microbiology...over 30 years should return a net industry benefit of \$44m. The industry benefit-cost ratio from predictive microbiology is 11:1. ... project has provided an inexpensive, effective and flexible method of validating processing techniques, minimising overall costs required to achieve higher food safety standards. Investment has reduced the risk of illness and has produced positive flow-on effects for the Australian economy. The Food Safety program is calculated to deliver extra spill-over benefits of \$162m over 30 years. *MLA website*

Promise	Progress	Performance
Safer products, lower compliance costs, competitive advantage, improved market access	Program outputs have been widely adopted by Australian export processors and industry regulatory bodies.	A \$4 million investment is expected to return industry value-added benefit of \$44.4 million over 30 years: benefit-cost ratio of 11:1 based on net present value.

Various evaluations at project level also indicate potential strong returns.

Objective (example)	Measure	Highlight	Benefit	Future
<b>Increase cost efficiency and productivity – off-farm</b> Investment: 2.0m <i>MLA Annual Report 2008-2009 p32</i>	Tools/ technologies available and used to minimise negative OH&S outcomes in the processing industry	A new robotic boning machine developed that reduces OH&S problems and increases beef yields.	Cost benefit of \$4.53 a head using the machine and a broader spectrum of employees able to do the job	Development of further applications of manual assist devices to key meat processing operations.

In part 5, the AMPC discusses the PC questions regarding direct and flow-on returns on investment, and the imperative of public funding support.

## 5. Investment in meat processing R&D and innovation

---

In this part, the AMPC discusses questions put by the PC on *Rationales for government funding support* [IP section 3] with reference to material in this submission parts 1-4. RDC-IOC structure and function are discussed in part 6.

The AMPC notes and understands the Productivity Commission positions that:

Assessments [will be based] on what set of arrangements would give the best outcomes for the community as a whole. In this regard, the interests of primary producers and the rural sector more generally will be a key consideration. However, in framing its recommendations, the Commission will also be taking account of wider impacts, including for other parts of the R&D system, the environment and taxpayers. *IP p2*

A high total return to the community from past investment in rural R&D is unlikely to be a sufficient reason to maintain (or increase) the current level of government funding support. ... there needs to be evidence that, without the government contribution, some socially valuable investment in R&D would be permanently discouraged. Otherwise, taxpayer's funds might simply displace private funding sources, with no overall increase in longer-term R&D activity. *IP p8*

The PC will receive other submissions covering economic arguments. Here, points raised in the IP s3 are considered from a practical meat processor perspective. PC questions include:

does the basic case government funding support for rural R&D rest mainly on wider (spillover) benefits for the community, or are there other important rationales to be taken into account? Is the case stronger than in other parts of the economy?

the extent to which it is practical when formulating government funding programs to delineate between private/industry benefits and wider community benefits? including the degree to which government funding is likely to induce additional R&D activity?

what factors might mute the strength and/or timing of any increase in private funding in response to a withdrawal of public funding for industry-focused R&D?

application of the economic concept of 'so-called market failure'; are there features of the rural sector that make R&D-related market failure more likely than in other parts of the economy? is it appropriate to view the case for government funding support solely through a market failure lens?

do the various rationales apply with equal force to the RDC component of rural research as to the activities of, say, CSIRO and the universities?

how important is it that government contributes to the cost of maintaining core rural research skills and infrastructure? Without that, how would the capacity to adapt overseas technologies to meet particular requirements be compromised? What role do RDCs play in maintaining core R&D capacities?

what importance should be placed on outcomes-based rationales for government funding support for rural R&D, such as enabling Australia's rural industries to meet increased global competition; facilitating adjustment to climate change; furthering food and bio-security objectives; and fostering regional development? Is there a risk that seeking to use government funding to drive specific outcomes such as these could distort the pattern of R&D investment and thereby reduce the overall returns to the community?

**A \$36m annual investment of public funds in red meat industry R&D represents some 0.3% of the value of the whole industry, varying year to year.**

Calculation (rounded): In 2007-08, gross value of cattle and sheep production was \$9.6billion; public R&D funds to MLA in 2008. Meat processing adds \$2 billion value. Government provided \$34.5m to MLA as matching R&D funds in 2008, plus say \$1.5m of departmental costs.<sup>35</sup>

A \$7.5m investment of public funds in red meat processing R&D represents some 0.37% of direct value added by the processing stage. Further value is added to communities through location, employment and training [part 2].

**This modest public investment in red meat industry R&D, organised through three Industry Owned Companies, is buying far more than the direct returns on most R&D programs** [part 4]. It also buys for the economy:

- *a functioning red meat industry structure* built around statutory support for MLA, AMPC and LC collection of levies that firms are willing to pay, plus the industry MOU, and public confidence as matching R&D funds [part 1].
- *R&D and innovation initiatives that stimulate and complement commercial activity* [part 4]. As the PC states [p8], 'there is widespread agreement that soundly-based R&D, supported by an environment that encourages adoption of the results, can provide significant economic and other benefits' .
- *the holding and building of R&D and Innovation activity levels* that parallel Government policy objectives for enterprise innovation, ie [from part 3]:
  - Businesses of all sizes and in all sectors embracing innovation as the pathway to greater competitiveness, supported by government policies that minimise barriers and maximise opportunities for the commercialisation of new ideas and new technologies.
  - researchers, businesses and governments working collaboratively to secure value from commercial innovation and to address national and global challenges.
  - doubling the level of collaboration between Australian businesses, universities and publicly-funded research agencies
  - a 25 per cent increase in the proportion of businesses engaging in innovation, and
  - continued improvement in the number of businesses investing in R&D.

These points are also measures of what is likely to be lost should it be decided to withdraw the public funding impetus from red meat processing R&D.

**Noting the leverage the Government receives from a small investment, the AMPC argues that high-importance should be placed on outcomes-based rationales for government funding support for red meat processing R&D.**

Such outcomes include: enabling the whole red meat industry to meet increased global competition, facilitating adjustment to climate change through industry-organised R&D programs, furthering food and bio-security objectives, fostering regional development, and *sustaining an enthused national processing sector on a rising R&D and innovation trajectory.*



**There appears no policy or practical basis for requiring, or suggesting, that public monies must only be spent on research to address wider issues**, such as climate change, water or invasive species. There is also no basis for a view that public benefits arise from just some industry-driven R&D (as in: 'Some of this activity also provides wider benefits to the community' by, for example, enhancing environmental outcomes' [PC IP p1]).

**Spillover or flow-on effects from both public and private innovation activity are the basis of public investments in research and innovation worldwide** (as reviewed in *Venturous Australia*, Cutler 2008). Higher levels of R&D energy and purposeful activity are key to innovation and its application in all industries.

The Cutler review highlighted a series of messages from their deep analysis of evidence on the economic impact of R&D, including that:

- Smaller firms benefit from the knowledge created in publicly funded research.
- The effectiveness of public research is enhanced by geographical proximity to private sector research laboratories.
- Businesses receive substantial productivity benefits from the research carried out in other firms - within their own industry, in other industries and internationally.
- Productivity growth in small countries like Australia requires the capability to adopt and adapt the 98 percent of new knowledge which is generated in other countries.
- Successful absorption of innovative ideas is heavily dependent on both trade with research intensive countries and on a country's own research capability.

**Australia cannot rely on commercial firms buying in technology as the main basis for boosting productivity in core industries.** The Cutler report noted that 'the dual role of domestic R&D in promoting not only domestic innovation but also technology transfer from overseas is particularly interesting'.

By actively engaging in R&D in particular intellectual or technological fields, one acquires .. tacit knowledge and can more easily understand and assimilate the discoveries of others. ... In other words, R&D is as crucial for technology transfer as for innovation and plays a role in developing 'absorptive capacity'.<sup>36</sup>

The socio-economic value of spillovers from government supported private research (by companies working to make a profit) is also acknowledged in the 2009 Treasury consultation paper on the new R&D tax incentive.

[A]n effective R&D tax incentive needs to result in firms conducting R&D that they would otherwise not perform because they cannot capture sufficient benefits from the activity to justify an investment. That is, although the benefits of the R&D activity 'spillover' to the rest of the community, it is not commercially sensible for any one individual company to invest. *Treasury 2009*<sup>37</sup>

**Red meat processing R&D programs show that combined industry and public incentives can mobilise R&D and innovation in companies that on their own could not justify the investment** – including work on productivity technologies, on systems, and environmental issues and product enhancement [part 4].

However, the Treasury R&D Tax Incentive paper goes on to argue that higher spillover benefits are likely where the R&D is systematic, investigative and experimental (SIE), ie. both innovative and technically risky. 'These conditions go more to the heart of why a subsidy for R&D is warranted.' The new R&D Tax incentive will operate under these criteria from July 2010.

As discussed in part 3, the two new general Government incentive schemes, although well developed, appear to have particular types of firms in mind. There is an understandable orientation to sunrise enterprises rather than mature, and vital, core Australian industries such as meat processing.

Particular industry features need to be recognised. Red meat processing is a high volume, low margin business, even with economies of scale. Costs are nearly as high as returns, often higher for parts of a year, or years on end.

Meat companies in the main, buy and then trade the animals they process. On ABARE data, broadly these companies purchase \$9.6b of animals (live export and some commission processing aside) at the farm gate or saleyard. The companies add a crucial \$2billion through high-employing plants in key locations. Many go on to trade the meat (some 60%) into world markets [part 2]. In this business arena, skilled and timely animal purchase, planning for seasons, sharp management of major plant costs, and smart handling of trade, delivery and global money flow make big differences to enterprise viability.

**Risk – financial and technical – along with the disruptive scale of innovation activity in meat plants and regulatory standardisation, forestalls 'risky R&D'.**

Yet, for the whole sector, innovation is a key to the future competitive edge.

What stops R&D and commercialisation? It is inherently risky, we all know that. Even with government support and best efforts, end up with \$700,000 projects sitting in the junk heap, and that is just our cash money part. Wouldn't do it just to get a tax deduction. *Processor, 2010*

**So, policymakers should not rely on the R&D Tax Incentive or project grants through Commercialisation Australia to stimulate red meat processing R&D and associated innovation culture.** While a scattering of discrete projects might fit baseline criteria for the highly competitive commercialisation grants, red meat processing is not a fashionable sector, and the CA procedures are focussed towards different types of inventions with large markets for outputs.

These two general schemes alone, could not muster even a small part of the research and innovation now being advanced using processor levies and matching R&D funds. If these were the only public innovation support, then the red meat processing enterprises and the sector would go backwards in terms of Ministerial objectives for rising innovation-based productivity [part 3]. There would also be little or no basis for undertaking across-sector R&D.

This scenario needs to be taken into account in examining 'the appropriate level of, and balance between public and private investment in rural R&D'.

**Some types of business innovation would, of course, still occur** [case studies, 4.1]. For many plants this would take the form of stepped investment decisions, over the years, to upgrade a shed or a line, and buying in technologies mainly from overseas (as local innovative plant development would be slowed by removal of public stimulus funding available through current programs, 4.2).

Local engineering firms are already in the private-public R&D space and their work would continue, but potentially in response to plants struggling to adapt imports to plant location, products and workforce, and to a regulatory system overlays innovation [part 2]. Australian development firms are currently involved in world-frontline R&D brought together in AMPC-MLA programs and carried out where it has to be done – in commercial meat plants (not research labs or model lines) to address issues experienced in Australia more acutely than competitor suppliers (including the USA with large pools of general workers).

The possibility that public funding of a proportion of rural R&D (some \$7.5m a year towards R&D for red meat processing systems for productivity, OH&S and environmental programs) could be 'crowding out' commercial firms and subsidising private activity appears to be a concern for some analysts.

The PC 2007 report, *Public Support for Science and Innovation*, particularly relays an impression that, in relation to rural RDCs, there should be no private advantage from public funding invested in R&D.

PC 2007 p429 ... a recent discussion paper on the national framework for primary industry research, development and extension (RDE) commented on the risks posed by current funding arrangements: *The current system of funding is characterised by a number of subsidies to private purchasers of research, with the risk that public resources are likely to be diverted to financing private gains.* (referring to Frontier Economics 2006 p iv)

PC 2007 p431 Australia's rural research corporations are one model of industry-based collectives. In this case, producers vote on whether there should be a levy (and, if so, its size), have a say in selecting the members of the Board for each RRDC and contribute to setting research priorities. Funding issues aside, this serves to align the interests of the producers with both the level and type of research undertaken. *But as producer groups dominate the representation on RRDC boards, there is a risk that research priority setting will focus disproportionately on benefits that are appropriable by that group.*

Notably, the PC also refers to models of cooperative research schemes that do not have public support [p431]. The AMPC suggests such schemes need to be examined in the context of the public-private mix in those industries overall. USA systems of ag-research based on industry levies should be reviewed in light of government support for agriculture in ways not seen in Australia. Similarly, the current debate on a Resources Super Profits Tax informs perspectives on industry funded research bodies such as AMIRA.

**Most developed countries run forms of public programs that direct money to encourage commercial entities to higher levels of activity, including the new schemes in Australia.** That these continue confirms that the public gains from public funds invested through commercial firms that also gain from the activity.

**Private gain, invigorated and leveraged by public funding drive, is the vital platform of many Australian grants programs** – for technological innovation, tourism development, or research through universities. Individual researchers across all disciplines receive grants funded by the taxpayer through Australian Research Council or though time allowed in universities. This pays for private gain as income. Even as the worth of this research piece by piece is under debate, the overall gain is a research and innovation enriched economy [ARC Excellence in Research for Australia reviews].

Another perspective put forward, including in the Frontier Economics (FE) review for the Primary Industries Ministerial Council (PIMC), is that RDC Boards and members have a focus on seeing returns for their cash contributions in the operation of their sectors and enterprises. The stated concern is that:<sup>38</sup>

subsidy can arise through the principle of matching co-financing through RDCs, if priorities determined by RDC boards are disproportionately influenced by private sector representatives [and there is] private under-investment in areas where some benefits are not appropriable that could be addressed only if stronger control is exercised by government representatives on RDC boards on the setting of research priorities.

**It is intriguing that reviewers look for returns on public funds, but seem not to allow that producers and processors want the same on their investment.**

In a 50:50 funded R&D system, it should not be surprising that pressure for measurable results and accountability for performance tends to drive RDCs towards the applied end of the RDE spectrum [FE p12]. It is such private returns that underlie the investment and commitment needed for public benefits.

Holding and building productivity is also a serious long term national issue.

**In a practical, rather than conceptual sense, sorting private/industry benefits and wider community benefits from both commercial and public investment is difficult.** Most jointly funded R&D activities should show returns to levy payers that can be seen ultimately in their pockets in some way.

As well, there will be spillover benefits beyond the entities involved. These will manifest as technologies, industry and wider innovation capabilities, all types of employment and exports, and enabling professionals to develop long-term careers with focus on the R&D in these sectors.

In red meat processing, Government funding clearly induces additional R&D activity (both within processing enterprises and by bringing-in, not crowding out, private sector technology and systems firms). This is consistent with the Government's national innovation policy objectives [part 3 and above].

Further, a proportion of this joint funding is also directed to across and multi-sectoral collaborative R&D to address broader issues affecting rural industries and the national economy. This would not occur otherwise. As FE observes:

Private stakeholders have limited incentives to pursue systemic or crosscutting research areas, such as food security, biotechnology, natural resource management, and climate change.

Another economic concept often raised as a test for public funding of any activity is, to use the PC's words, 'so-called market failure'. AMPC members live and die in marketplaces, but these are adjusted, even distorted, by many influences, including both necessary and societal regulatory regimes.

Factors such as the essentiality of food and protein, and that agricultural production is both a national tradition and the socio-economic basis of much of the Australian land mass, add complexity. A long series of reviews and responses provide the answer to the PC question: *it is not appropriate to view the case for government funding support solely through a market failure lens.*

**Rather, the AMPC considers other types of questions should be asked about the statutory and R&D funding support for RDC-IOC structures.** Specifically:

1. Are statutory arrangements underpinning levy collection and RDC-IOC operation adding value to the industry and the economy through delivery of collaborative marketing, R&D and industry services?
2. What structures should work best for these industries to achieve the Australian policy objective, and the economic imperative, of raising productivity through innovation, research and developmental change?
3. Is the public money invested through RDC-IOCs to support research and development, well spent against policy and economic measures?

**A fourth point is what will likely happen if the current structures (based to a large extent on the carrot of \$7.5m of matching R&D funding) are removed?**

From experience, the AMPC can say that taking away the R&D funds would diminish industry interest in and capacity for collective R&D, applied or cross-sectoral. Differences in benefits individual entities perceive from the RDC-IOC system will constrain their collective interest and willingness to offset any reduction in government funding through higher levy payments [see also 6.2].

Without access to matching funds, collegiate R&D levy payments would cease. Such thinking will progressively extend to and affect the marketing, product and industry service programs being progressed with an appropriate mix of levy and R&D funds, including skills work through MINTRAC [4.2].

**This would undermine the critical mass of activity now underway.** It would also negate a decade of group processor effort to bring the AMPC to a point where the next level of strategic returns to the sector, and the economy, are on the near-horizon.

**The key to securing these returns will be the great strength of industry specific RDC-IOCs, 'their linkage to their constituents'.** From these close links come relevance, strategic direction, and in turn, pathways for effective change.<sup>39</sup>

## 6. RDC-IOC structures and operation

---

**The RDC-IOC model is strong, it has resilience and flexibility, and is said to be the envy of agricultural industries around the world – but it could improve.**

A series of studies as summarised by ABARE-BRS,<sup>40</sup> have identified –

the achievements of rural R&D and highlight opportunities for enhancing its effectiveness. The Productivity Commission [2007] noted that the governance design for RDCs may be improved through routine program evaluation employing rigorous and transparent methods. The Cutler review [*venturousaustralia* 2008] suggested that while the R&D system requires renewal, *a significant focus should be on improving the capacity of firms to apply the products of science and research.*

### 6.1 Across sector issues and co-ordination

---

There have been calls for higher co-ordination to turn rural R&D more towards 'cross cutting issues' and national problems, such as climate change. Also calls for a 'framework for strategic assessment of R&D needs across the whole rural sector'. Some want to move RDC-IOC funding into these areas.

**These propositions indicate it is important to look into the history and purpose of the RDC-IOCs.** The success of the RDC-IOCs has been, and is, built on the interactions and behaviours of *people*, not technologies. The AMPC notes that the recent Moran Review emphasises 'it is people, not systems, who produce excellence and drive change'.<sup>41</sup> There is a substantial history of people interactions behind the statutory arrangements in rural industries.

RDC structures have evolved over 20 years, and red meat industry issues are recognised as the catalyst for turning point change in 1984 and 1998. Many in this industry have active memory of the circumstances and conduct.

It is worth reviewing the origin and intent of the corporation model, reflecting on hard lessons from prior arrangements, and noting learnings for the future.

The Corporatisation Model was a major reform by Minister John Kerin and Department head Dr Geoff Miller. Timing was sparked by red meat contention.

**These new structures were to address a triangle of problems occurring across rural sectors,** around –

- market control between farm producers and processor buyers-traders
- decline and loss of direction of rural industry R&D, and
- how to define priorities.

The Kerin-Miller reforms are explained in a thorough and informative review by Dr Siwan Lovett, *Revitalising Rural Research and Development in Australia ... the story so far* (1997).<sup>42</sup> A set of issues had been generated by the statutory marketing authority model that flowed across Australia from the 1930s to 1990s.



The Australian Meat and Livestock Corporation (AMLC) was in chaos at the time [1983] Kerin took over the Primary Industries portfolio ... This corporation was part of the network of Commonwealth statutory marketing authorities. The original intent was to give farmers bargaining power through centralised selling commensurate with that enjoyed by those who bought their products. Each authority was headed by a board largely made up of producers. Over the years each board's activities had developed to provide marketing services that ranged from generic promotion to the funding of market research. The administration of market regulations, such as export licences, also came under their auspices. Problems with the operation of the authorities has developed over the years, tainting their existence. These problems placed Kerin under increasing pressure to deal with the difficulties the AMLC, in particular, was exhibiting. ... the difficulties stemmed from the fact that, in trying to bolster up the market power of the farmer vis-à-vis other sectors of the economy, the government had actually tipped the balance of power too far in the farmer's favour'.<sup>43</sup>

The second need was to transform research from an isolated, public sector, and declining, element of the economy, to be catalytic, synergistic, and productive, *with incentives to industry users to engage and focus on priorities.*

[At the time, research] priority setting depended on the network of research committees responsible for making decisions about allocation of R&D dollars across particular commodity areas. These committees tended to be made up of eminent ex-scientists drawn from a predictable set of institutions .... Research priorities for rural R&D were being set by scientists, conducted by scientists and measured according to the scientific profession's standards. Scientists were using the suitability of papers for publication as a primary determining factor in the allocation of funds. ... Miller questioned whether this was a system delivering benefits to producers or to the general community. ...

[Miller] described the concept of the RDCs as being the 'cornerstone' of the changes made to the 1980s research system. The corporation model chosen primarily ... to address what he saw as the paramount problem – the identification of research priorities. ... Problems with priority setting ... at the national level [arose from] the level of abstraction involved in setting broad national research priorities. Even with wide consultation with a range of experts, he believed there would be only a million-to-one chance the priorities discovered would be in accord with any underlying 'real' or 'optimum' set of priorities. ... Corporatisation was the model ... best able to redress the priority setting problems .... The RDCs created the right incentives ... to maintain and develop and R&D system. ... Rather than set up a committee of 'wise men' ... the best incentive for any system Miller and Hussey (a senior DPI economist) reasoned, was money. ...

This resulted in the development of a scheme designed to overcome the constant battles fought with Treasury each year for rural R&D funds. The formula developed was based upon a matching government/industry levy arrangement. ... Miller argued the matching levy was [a system that would] provide ownership of R&D by producers ... and lead to promotion of R&D...

**Notably, the Corporatisation Model was introduced to address national cross-sector issues – the declining productivity of agricultural industries, and rural R&D at a standstill – by focussing the minds of those in the business.** Kerin and Miller fought colleagues wanting to centralise and streamline. They exercised 'a strong faith in the value of entrepreneurial activity which [Miller argued] was needed to avoid the pitfalls of bureaucratic and political life'.

Individuals who were entrepreneurial would, according to Miller, provide the R&D system with the dynamism and flexibility it had previously lacked ... The organisation that would enable such capacities to be realised was one that was commercially oriented and corporate in form. *Lovett*

Most agree these objectives were achieved. The world-envy RDC-IOC system of today, and its outputs, reflect the vision and lessons from before.

It is intriguing to the AMPC that the fundamentals of productivity R&D [ABARE-BRS], and of lifting innovation in all enterprises [Minister Carr], and of improving the capacity of firms to apply products of science and research [Cutler], seem now, in rural R&D discussion papers, to be seen as 'short-term claims'. As in:

What principles do you use to balance short-term claims with long-term requirements?

The RDCs seek to balance shorter-term applied research and longer-term strategic research.

**Productivity R&D, innovation initiatives and capacity development are long-term strategic requirements for Australia. These have been identified by a series of Ministers as cross-sector, national issues** [including Carr, Tanner<sup>44</sup>].

In Australian rural industries, industry-driven, industry connected RDC-IOCs backed by the incentive of some public R&D funds, are a key and tested mechanism for addressing the productivity, R&D and innovation challenges.

Reinforcing the analysis and logic of Kerin, Miller and associates, a recent combined RDC response to a Rural R&D Council paper, called the knowledge and experience of generating change in rural sectors.

**Support towards productive viable businesses and income security underlies achieving wider 'good' outcomes**, just as it does for businesses in cities, and individuals in their income earning work.

The principles that balance commercial interests with public good objectives should be the same, given that there are many public good outcomes from investment in rural R&D that has a commercial focus. Sustaining the delivery of these public good outcomes is best achieved by aligning it with private incentives. *RDC response to Rural R&D Council paper 2010*

**There are, AMPC agrees, other types of cross-sectoral and national issue challenges that must also receive research attention.** Climate change for example, similarly soils issues across regions, invasive species, transport, skills.

Departments, agencies, institutions and centres, 'rural' and other, are working on these across-sectoral, national priority issues. The RDC-IOCs are involved in many of their activities, including RDC collaborative projects. The AMPC is engaged through funding and participation in programs around food safety, environmental issues, health and skills [part 4]. Nevertheless, there seems to be a momentum of expectation that all public funds invested in rural RDC-IOCs should be dedicated to declared 'public-good' research. And also that 'there will be a national plan' for rural R&D [RRDC, 2010].<sup>45</sup>

**AMPC stresses that any such plan should not erode the vital RDC focus on the national priority of lifting productivity** – through R&D, innovation and capacity building, at sector and enterprise level, by harnessing entrepreneurs, cultures and ways.

## 6.2 Structures, and funding

---

**The AMPC is conscious of different entities operating in the rural R&D arena, and co-ordinates with a number of these through R&D programs.** There are views now of 'a significant opportunity for the primary industry sector to [develop] a new rural innovation policy framework that seeks to leverage the combined capabilities and talents of Australia to tackle the big cross-cutting issues' [Rural R&D Council, Mar 2010]. On this broad question, the AMPC notes that:

- Most of these organisations and R&D systems (CSIRO, CRCs, RDCs, State departments), are well-established, often reviewed (including recently) and have evolved in response to economic, social, policy and industry needs, as well as with frontlines of knowledge. The CSIRO has five flagships working on cross-cutting issues that impact on rural *and other* industries (Food Futures, Future Manufacturing, Water, Sustainable Agriculture, Climate Adaptation). A number of CRCs are also addressing cross-cutting issues.
- As in any set of arrangements, there can be tensions at times as priorities and challenges evolve, but the parts of this system are tested. A key issue appears then to be overall amounts of money being invested in rural R&D.
- This PC inquiry is into Rural Research and Development Corporations, not all rural R&D (which has been reviewed elsewhere). This indicates there has been a level of decision already that some RDC change is going to occur.

The AMPC is concerned, but not surprised, that thinking outside the RDCs appears to favour more control by broader public entities, to steer and 'bring everything together'. However, this would be the antithesis of the foundation and demonstrated success of RDC-IOCs for their sectors and the economy.

**The AMPC reiterates the importance of maintaining the key RDC-IOC focus on raising productivity through R&D, innovation and capacity building.** The farther any structural change moves from sector driven R&D/ innovation model with its close links to operating firms and networks of entrepreneurs and industry R&D providers, the more likely loss of purpose and results will occur.

Financial, economic, attitudinal and societal returns on the Kerin-Miller model should be enough evidence to prove that risk. As Minister Carr says 'every sector experiences things in its own way'. RDC-IOCs should focus on their core business of productivity R&D for their sector. This should include being involved in a proportion of research on other national issues. Such involvement should also open pathways crucial for change implementation.

In this context, and from the red meat processing sector perspective, the AMPC now considers five possibilities that have been raised in discussions:

- No compulsory industry levies and no public funding
- Compulsory industry levies and no public funding
- Separate body to deliver public good/cross-sectoral R&D
- Contestable process to deliver public good/cross-sectoral R&D
- Reduced number of RDCs with stronger directions from government.

**No compulsory industry levies and no public funding.**

Under this scenario, with no statutory support for levies nor the incentive of access to matching R&D funds, there would likely be no national collective red meat industry service organisations within a short period of time [part 1].

Livestock producers will likely continue to fund agri-political entities on a voluntary basis and may make special contributions for work on particularly emotive issues, but with little research backing. There will likely be attempts to rally voluntary levies for generic marketing programs, but interest will fade in the face of adversity and others dropping out (free riders). Local marketing or applied research clusters may come and go. They will seek public support through various channels. Processors will continue to fund a policy body (AMIC).

R&D programs will cease as reserves deplete. Under pressure from scientists the Government will expand direct funding to CSIRO. Under pressure from industry, the Government will step in to fund quasi-regulatory activities such as AusMeat.

Processor contributions would stop within a year. (Red meat processors through the AMPC tried for eight years to make voluntary levies work.) There will be flow-on from current R&D and innovation activity, but each company will need to divert all time to their own marketing and development efforts. Some firms will progress innovation systems, some will return to step-change upgrades with focus more on cutting costs. In time, without the innovation impetus, sector capability to adopt and adapt innovation from elsewhere will decline.

**Compulsory industry levies and no public funding.**

Statutory support for industry levies and access to matching R&D funds are linked and together underlie the RDC-IOCs. These also provide the foundation for the Meat Industry MoU [part 1]. If public R&D funding were removed it is likely the industry sectors would each try to continue major programs utilising only levy funds. However, levies would likely be reduced over time as contributors would be less interested in funding collective R&D without public incentive.

The Industry Owned Companies would not merge, as this is also a scenario tested in history and it does not work. Red meat processors through AMPC would likely continue to contribute to particular MLA marketing programs, on a case basis. R&D and innovation programs would fade as described above.

General public innovation support schemes will in no way hold the loss [part 5]. In both scenarios there would be no industry R&D contribution to wider issues.

**Separate body to deliver public good/cross-sectoral R&D  
Contestable process to deliver public good/cross-sectoral R&D.**

The AMPC is stressing the importance of ensuring RDC-IOCs continue what they do best – R&D, innovation, extension and industry services to advance sustainable productivity of enterprises and the sector. This, of course, involves attention to OH&S, skills, environmental resource management, and markets. Much of this work has to be in collaboration with other RDCs and groups [part 4].

The AMPC feels that in the scramble to show they are doing cross-cutting work, some RDC-IOCs are losing sight of this great and proven strength, which ties with the Government policy of lifting productivity across all industries.

If the Federal Government and its advisory groups consider there is insufficient effective research underway into public good / cross sector issues, then additional RDC funding could be warranted. On this, the AMPC observes:

- *There is no basis for redirecting matching R&D funds from RDC-IOCs to another body.* Productivity, innovation and capacity development are fundamental national priorities. Without R&D effort directed to these, the national capacity to address 'big issues' is systemically reduced. Industry sectors and the economy are receiving solid returns from current levels of investment [part 4]. The public money invested through RDC-IOCs to support R&D is well spent against policy and economic tests.
- There will be inefficiencies and disappointments in setting up any new entity in between RDC-IOCs and existing expert research bodies such as CSIRO. The portents are set out in reports of pre-RDC research structures including scientists progressing scientific interests, and inability to develop useful priorities because of distance 'from the front' [6.1]. The RDC-IOC track record itself reinforces the essentiality of the close ties to commercial businesses within the culture of each sector through tailored involvement. For issues such as climate change, the economy cannot rely on the poor history of scientist or policy-run bodies trying to define priorities and bring in grass-roots change. Utilising the strengths of the RDC-IOCs will be crucial.

#### ***Reduced number of RDCs, with stronger directions from government.***

The RDC-IOC model is fundamentally sound. This is well-tested. Evaluations of core business of R&D, innovation, extension and industry services to advance sustainable productivity of enterprises and the sector show high returns. The RDC-IOC model can and does achieve its legislated objectives, including 'increasing economic, environmental and social benefits'.

It is the focus of particular RDC-IOCs on their sectors, the close connection with enterprises and support businesses, that achieves the results. There is a natural logic to identification of a sector, a mutual recognition of individuals and firms linked by what they are trying to achieve, by processes, products, workers, markets, technologies, cultures and history.

In the red meat industry, meat processing companies, even those vertically integrated, are distinctly different to livestock farms, as history clearly shows.

The set of 15 sector based RDC-IOCs that evolved over 20 years reflects these logical segmentations. Groups have worked together to address needs by seeking to form a RDC. Sector commonalities, even among competitors, are a key to collective action on issues, to group innovation and to achieving across-sector productivity advances, as recognised by Minister Carr.

Reducing the number of RDCs for possible moderate administrative gains, threatens loss of the strengths of the RDC-IOC model that would be slower to see, but potentially far more costly.

**The AMPC supports continuation of the current red meat Industry Owned Corporation arrangements – MLA, AMPC and Livecorp.** The IOC structures in the red meat industry are key to collaborative efforts and productivity advances that return more than it costs industry and taxpayers. Statutory backing and R&D funding are the platform for this synergistic effort.

However, the AMPC is aware that this Inquiry and subsequent interactions could lead to changes in RDC-IOC structures. In this context, and recognising that it is a smaller IOC, the AMPC must put its position clearly to this Inquiry.

If current arrangements are opened for change, then the AMPC considers there is room for clarification and improvement. As put forward in parts 5 and 6, this Inquiry needs to return to the purpose and operational strengths of these statutory entities. To do this, the sources and intentions of all funding need to be examined. To look just at R&D funds would be remiss.

**With change being forecast, through this submission the AMPC is arguing that:**

1. The RDC-IOC model be retained by the Australian Government and the Australian Meat Processor Corporation continues to be structured as an Industry Owned Corporation within the RDC-IOC framework.
2. AMPC must be a separate entity, operating at arms-length to AMIC and MLA. As reasoned in this submission, there is no basis for, and potential for major loss from, any move to merge AMPC with other IOCs. AMPC would be charged, as now, to interact positively and effectively with all groups.
3. This distinct IOC status is fundamental to red meat processors continuing to pay a levy, at a rate set by AMPC Board and members, to fund the supply chain R&D, marketing and industry programs that are delivering results.
4. Red meat processors, as pivotal industry participants, have access to Commonwealth Government matching funding investment for R&D.
5. Provisions requiring that MLA be the only service providing company for AMPC programs be reviewed and made generally contestable.
6. The AMPC continues as a designated Donor Company as an avenue for optimum utilisation of Commonwealth R&D investment and for leveraging additional voluntary contributions made by processor companies.
7. In addition, in the event of any restructuring, the AMPC would look to receive and manage all statutory levy funds paid by members, including \$4-6m a year of transaction levies from red meat processing firms with feedlot and grazing activities. The case for this closer alignment with sector structures is outlined in this paper. Processors, working through the AMPC, and in collaboration with a range of skilled providers, are best positioned to secure returns for the sector, the industry and the wider economy from these funds.



### 6.3 Governance, efficiency, evaluation

---

Proposals for 'increased government direction' appear to relate to two issues – requiring dedication of funds to types of wider interest R&D [discussed above], and concern about governance and efficiency of RDC-IOCs.

**Structures, governance and efficiency are linked. Again the natural logic of sector commonalities and focus should engender efficiencies.** Like others, the red meat industry has two main sectors – livestock producers with farm based enterprises, and meat processors including vertically integrated firms that operate properties, feedlots and plants, through to export trade. Dedicated feedlot operators, and live animal exporters are smaller industry sectors.

In the face of mooted change, red meat processors have flagged that they would be putting a case for the AMPC to receive and manage expenditure of all statutory levy paid by red meat processors as vertically integrated business entities. That is, levies from processors who only run plants, through to all red meat levies paid by processor companies with feedlots and properties.

This would be a more logical sector balance, and a sensible progression in the evolution of the AMPC. The redirection of this \$4-6m of levies from MLA to AMPC would facilitate the harnessing of all aspects of processor experience and entrepreneurship towards increasing productivity and reducing impacts along the vertical supply chain to national benefit. It should reduce differences between MLA and AMPC on areas that relate to the quite different business models and competitive situations of farm producers and processor firms. AMPC would look to contribute to MLA production R&D including on land-use issues, and further to marketing programs, with cash and constructive input.

**Now in its third year since statutory levies, and with a partly new board, the AMPC is working to build governance and efficiency, including in services.**<sup>46</sup>

Under the shifts proposed above, the AMPC would develop its capability to service broader program and project management responsibilities.

In particular, the AMPC Board is actively examining:

- Potential for value adding by skilled independent directors, plus processes at Board level for differentiating expertise and interests.
- Further development of risk assessment (strategic, financial, administrative) and management procedures, practices, audits and reporting.
- AMPC strategic planning, performance targets, and measures of return.
- Resourcing for effective, front-foot, program development, commissioning, collaborative management, and pre, mid and post project evaluation.
- Clearer interactions during PIPs and collaborative innovation strategies.
- AMPC actions to ensure extension of results, so all members, as well as Government and other stakeholders, can see and experience the returns.

## Endnotes and references

<sup>1</sup> PC, 2007, *Public Support for Science and Innovation*, Research Report, particularly p10.

<sup>2</sup> Senator the Hon Kim Carr, Speech - *Collaborating for Success*, Melbourne 19 Apr 2010.

<sup>3</sup> 'For Australian agriculture and food producers to maintain international competitiveness and ensure environmental sustainability, productivity growth is essential. ... A key driver of productivity growth is the development and adoption of new production technologies.' Mallawaarachchi, Walcott, Hughes, Gooday, Georgeson and Foster, 2009, *Promoting productivity in the agriculture and food sector value chain: issues for R&D investment*, ABARE and BRS report to the Rural R&D Council, Canberra, December.

<sup>4</sup> The Treasury, Australian Government consultation paper, *The new research and development tax incentive*, Sept 2009.

<sup>5</sup> 'There will always be private incentives to undertake some R&D because the individuals or businesses undertaking R&D stand to benefit from the results of their R&D. However, they are not likely to be the only beneficiaries of R&D. Depending on the type of R&D, other parties stand to benefit from investments in R&D. This reflects the concept of "spillovers". Spillovers are one reason why R&D has important benefits that extend beyond the party undertaking R&D.' Frontier Economics, 2009, *International drivers of rural R&D*, A report prepared for the Department of Agriculture Fisheries and Forestry, on behalf of the Rural R&D Council.

<sup>6</sup> Core, Peter, 2009, *A Retrospective on Rural R&D in Australia*, in collaboration with the Australian Department of Agriculture, Fisheries and Forestry as a background paper for the Rural Research and Development Council, November.

<sup>7</sup> Meat Research Corporation, *Annual Report 1995-1996 and Project Guide 1995-1996*.

<sup>8</sup> Bills Digest No. 79 1997-98: *Australian Meat and Live-stock Industry Bill 1997* (Ireland and Hicks 4 November 1997); Bills Digest no. 164 2006-07 *Agriculture, Fisheries and Forestry Legislation Amendment (2007 Measures No. 1) Bill 2007* (Hicks and O'Neill, 30 May 2007).

<sup>9</sup> Core, as above, 2009.

<sup>10</sup> Australian National Audit Office (ANAO), 1998, *Restructuring of Meat and Livestock Statutory Organisations*, June.

<sup>11</sup> For detail of statutory levies: [www.daff.gov.au/agriculture-food/levies/livestock](http://www.daff.gov.au/agriculture-food/levies/livestock).

<sup>12</sup> *Federal Future Harvest Statement*, May 2007. Also references for this Part: ABARE *Australian Commodities*, March quarter 2010; ABARE Fletcher, Buetre and Morey, *The value of the red meat industry to Australia*, June 2009 and prior reports.

<sup>13</sup> Mintrac, 2007, *Establishing the economic benefits of a meat industry trained workforce*.

<sup>14</sup> Productivity Commission, 2009, *Performance Benchmarking of Australian and New Zealand Business Regulation: Food Safety*, December.

<sup>15</sup> ABARE, 2007, *Australian food industry performance and competitiveness*, *Australian Commodities*, March.

<sup>16</sup> 1999 figures: 1.5mt for beef (others near 0.5mt), 0.3 mt for sheepmeat (others 0.4mt). Data extracted or gauged from MLA *Feedback Top 25 Red Meat Processors*, and Top 25 Red Meat Value Adding Companies survey reports 2007, 2006, 2004, 2000, 1999, 1998.

<sup>17</sup> ACCC, 2007, *Examination of the prices paid to farmers for livestock and the prices paid by Australian consumers for red meat - A report to the Minister for Agriculture*.

<sup>18</sup> Meat Notices are available at: [www.daff.gov.au/aqis/export/meat/elmer-3/notices](http://www.daff.gov.au/aqis/export/meat/elmer-3/notices).

<sup>19</sup> The across-sector AMPC-MLA R&D for technological advance and validation of new systems involving regulators includes, for instance: *Develop and validate alternative stunning technologies*, and *Validate alternative refrigeration systems*.

- 
- <sup>20</sup> MLA-AMPC, 2007, *Plant Initiated Project Program Outcomes Report 2000-2004*.
- <sup>21</sup> Meat Industry Council (MIC) submission to the PC Review of Cost Recovery by Commonwealth Agencies, 2001 [www.pc.gov.au/projects/inquiry/costrecovery](http://www.pc.gov.au/projects/inquiry/costrecovery); *Export Assurance, NCP Review of the Export Control Act 1982* (2000); The Government Response to the National Competition Policy Review of the Export Control Act 1982, with elaborations prepared by AQIS February 2003.
- <sup>22</sup> The National Innovation System was scoped most recently in the Federal Government commissioned review: Cutler, 2008, *Venturous Australia – Building Strength in Innovation*. Aspects of this report are discussed in Parts 5 and 6.
- <sup>23</sup> Senator the Hon Kim Carr, Speech - *Collaborating for Success*, Melbourne 19 Apr 2010.
- <sup>24</sup> [minister.innovation.gov.au/Carr/Pages/SETTINGTHEINNOVATIONAGENDATO2020.aspx](http://minister.innovation.gov.au/Carr/Pages/SETTINGTHEINNOVATIONAGENDATO2020.aspx). Also DIISR and Commercialisation Australia websites.
- <sup>25</sup> Senator the Hon Kim Carr, Speech - *Collaborating for Success*, Melbourne 19 Apr 2010.
- <sup>26</sup> Minister, *Setting the Innovation Agenda to 2020 (release of Powering Ideas)*, May 2009.
- <sup>27</sup> PWC Advisory May 2010: [www.pwc.com.au/tax/research-development/index.htm](http://www.pwc.com.au/tax/research-development/index.htm).
- <sup>28</sup> KPMG Canada, 2010, *Competitive Alternatives 2010, Special Report: Focus on Tax* p21.
- <sup>29</sup> Prime Minister and Minister, *Commercialisation Australia to support 21 Australian Innovations*. Media release and list, 16 Apr 2010.
- <sup>30</sup> For instance, the Queensland CountryMeat Processors Association, a network of 43 small rural based mostly family meat processing companies, vertically integrated with local retail. Collaborative innovations tailored for this group include abattoir monitoring and reporting systems and computer based tools to save time, reduce duplication, and increase accuracy in completing statutory returns, plus a benchmarking system. *Supply Chain Management case study 4/2005*.
- <sup>31</sup> MLA, 2004, *Validation of the Chilling of Hot Boned Manufacturing Meat and Primals* PRMS.020. This publication is the result of the work of an expert panel convened by MLA in 2000. The Hot Boning Expert Panel had representatives of regulators, meat processors and research organisations, chaired by MLA. A large number of people were involved in the work of the panel over its life including as recorded in the report: Marc Chambers E.G. Green & Sons (processor), Peter Greenham H.W. Greenham & Sons (processor), Ian Jenson MLA, Noel Kelson Midfield Meats (processor), Karen Krist Australian Meat Industry Council AMIC, Tom McMeekin University of Tasmania and Australian Food Safety Centre of Excellence, Tom Maguire AMIC (and processor), Jim Murray AQIS, John Sumner MLA, Paul Vanderlinde Food Science Australia.
- <sup>32</sup> MLA, 2006, *Plant Initiated Project Program Outcomes Report (2000-2004)*. PIPs reviewed in this evaluation included:
- EAN Integration (PIP.103)
  - Automated Skin-on Goat Processing (PIP.065)
  - High Speed Sorting and Labelling at Tabro (PIP.095)
  - Evaluation of Effect of Knife Sharpness on Production and Safety (PIP.088)
  - Robotic Kidney Fat Removal at Colac (PIP.069)
  - Innovation and Energy Management and Reduction (PIP.014)
  - Performance and Productivity Program (PIP.028)
  - Sludge Moisture Reduction Pilot Plant (PIP.034)
  - The Carni Boning System at Yarrawonga (PIP.054)
  - Plant System Integration at Oakey (PIP.091)
  - Rendering Plant Energy Optimisation (PIP.039)
  - Recovery of Brains and Tongues from Lambs (PIP.051)
  - Innovative Freezing and Handling System for Bulk-Packed Meat (PSHIP.084)
  - Analysis & Interpretation of Pollution Loads in Wastewater Streams, Wagga Abattoir (PIP.012)
  - Potential for Reuse of Low Contamination Abattoir Effluent (PIP.010)
  - Water Use Reduction program (PIP.011)

---

- Biological Desludging of Anaerobic Waste water Treatment Ponds (PIP.023)  
 - The Development of CPMS (PIP.064.1, PIP.064.2, PIP.097, PIP.101, PIP.105, PIP.106)  
 - Smallstock Evisceration (PIP.015)  
 - Life Directions - Innovative Employee retention program (PIP.030)  
 - Industry Ergonomic Assessment, Claims and return to Work Management (PIP.072)  
 - PIP.134: Waste Treatment Systems Audit and Improvement; Water Electricity Management ACC Brisbane; Plant Energy Audit at Northern Cooperative Meat Co; Saving Energy by Refrigeration Automation at AMH; Water Audit and Reduction AMH Toowoomba; Site Energy Audit at AMH Townsville; Collecting Paunch Contents for Composting; Alternatives to 82°C Water for Sterilisation of Knives; Energy Usage Review and Improvement at Dubbo; Water audit at Fletcher, Dubbo; Creating an environmental management system.

<sup>33</sup> AMPC checked with DAFF on the status of funding proposed for MINTRAC projects. In Nov 2008, DAFF replied: 'MINTRAC Funding. You asked for confirmation that AMPC's contribution to MINTRAC covering both project and overhead costs can be classified as R&D for the purposes of the SFA. The answer is yes. Reasoning: Expenditure on MINTRAC falls within the AMPC strategic program: "Encouraging programs to improve capacity in the adoption of new technologies", with the particular activities being to "improve worker productivity and minimise industry training cost". This costs associated with this program can be appropriately classified as R&D. Any joint funding of MINTRAC projects with MLA which may be subject to claims for Commonwealth R&D matching will need to be considered by MLA under its matching guidelines and within its GVP cap limits.'

<sup>34</sup> In2it Consulting, 2006, *MINTRAC Review*.

<sup>35</sup> Data from ABARE Fletcher, Buetre and Morey, 2009, *The value of the red meat industry to Australia*, and the *MLA Annual Report 2009*.

<sup>36</sup> Cutler, *VenturousAustralia*, 2008, quoting Griffith, Redding, Van Reenen, Mapping the Two Faces of R&D: Productivity Growth in a Panel of OECD Industries, *Review of Economics and Statistics* 86: 883-895 (4, Nov 2004).

<sup>37</sup> The Treasury, *The new research and development tax incentive*, Sept 2009.

<sup>38</sup> Frontier Economics 2006, *National Framework for Primary Industries Research, Development and Extension: Economic Considerations*, Discussion Paper.

<sup>39</sup> Core, Peter, 2009, *A Retrospective on Rural R&D in Australia*.

<sup>40</sup> ABARE-BRS, 2009, *Promoting productivity in the agriculture and food sector value chain: issues for R&D investment*, above.

<sup>41</sup> The Moran review, *Ahead of the Game: Blueprint for the Reform of Australian Government Administration*, Mar 2010. The AMPC also notes guidance for small agencies to 'obtain their corporate services from a parent agency or shared service provider'.

<sup>42</sup> Siwan Lovett, 1997, *Revitalizing Rural Research and Development in Australia ... the story so far*. pp16-20. Published by Land and Water Research & Development Corporation.

<sup>43</sup> Lovett, 1997, p16, quoting Keith Campbell, 1973, *Agricultural Marketing and Pricing*.

<sup>44</sup> The Hon Lindsay Tanner MP, Speech: *Better Regulation: Driving Productivity and Growth*, 15 Feb 2010. 'If we let the trend of lower productivity growth continue, Australia will struggle to meet the major challenges facing our economy in the decades ahead. ... The Rudd Government's productivity reform agenda ... is centred on major investment in infrastructure, skills and innovation and importantly on economic and regulatory reform.'

<sup>45</sup> Kate Grenot Rural R&D Council Chair, 2010, *What should rural R&D investment look like?* To ABARE Outlook Conference, March.

<sup>46</sup> The Moran review, 2010, as above, includes guidance that small agencies should 'obtain their corporate services from a parent agency or shared service provider'. AMPC is not in a parent agency structure, and should be at arm-length to entities such as MLA and AMIC. However, administrative efficiencies of all types are being examined.