Examples of improvements due to new technology.

Biogas:

Currently, there are 18 systems across Australia, with four of these systems participating in the Carbon Farming Initiative (CFI) - generating approximately $2M in CFI credits and abating over 101,000 t CO2/year. A number of sites (7) have been successful in the Emissions Reduction Fund (ERF) scheme contracting 0.5 million tonne of CO2 abatement worth >$7.1M million in credits.

Novel fertilisers and feeds:

APL was successful in being the lead agency in the Federal Government's Rural R&D for Profit project 'Waste to Revenue: Novel fertilisers and Feeds' worth $2 million. This project is also supported by Dairy Australia (DA), Sugar Research Australia Ltd, Meat & Livestock Australia and Rural Industries Development Corporation (Meat Chickens). The project, being carried out by University of Queensland and University of Western Australia, aims to develop new waste technologies that utilise algae, purple phototrophic bacteria and chemotrophs to recapture nutrients in waste as fertiliser and feed products.

APL Tech Toolbox App:

The Australian pork industry, like other industries, is also looking to new IT solutions to better engage with its producers. The APL Tech Toolbox 'App' has been developed and is designed to quickly disseminate key APL research outcomes, best management practice information and coming events to all levels of industry. The App will also be a key to gaining industry feedback on adoption levels and rates of APL R&D information and help APL to further target its information delivery systems.

Traceability and biosecurity:

A world first traceability technology for the Australian pork industry is Physi-Trace. This enables the rapid and cost-effective trackback of a pork sample back to the farm of origin. Physi-Trace is a traceability tool that uses trace element profiles, chemical and organic markers to discriminate between pork samples based on region of origin. Trace metal analysis was conducted on imported and Australian processed ham and bacon samples and used to verify Country of Origin Labelling (CoOL), demonstrating Physi-Trace's ability to verify label claims e.g. PorkMark and Product of Australia. Revised sampling and analytical plans have been implemented to deliver Physi-Trace to industry at a cost of $0.05/pig.

APL, supported by Department of Agriculture funding, has implemented PigPass, a live pig traceability system. PigPass integrates the National Vendor Declaration for pigs (PigPass NVDs) with movement reporting. Movement reporting has implemented for property to property, abattoirs, and saleyards, with showground reporting under development. Through PigPass, APL has mapped all producers, including their quality assurance status, abattoirs and saleyards. In the future, PigPass will facilitate levy reconciliations and assist with verification of members levy contributions for the purposes of its three year membership process.

The integration of Physi-Trace with industry QA system APIQ and PigPass under the Pork Supply Chain Integrity Program supports traceability and provenance claims of Australian pork to be verified through the Trust in Australian Quality Pork program.

Carcase classification:

In May 2012, the Australian pork industry has also launched PorkScan, an AUS-MEAT approved system for measuring carcase quality. The PorkScan system measures fat and muscle depth at the P2 site on a pig carcase using an ultrasound probe. PorkScan captures and stores measurements for every carcase on the slaughter floor, allowing producers to query results for particular carcases with their processor if required. Currently, this system is being refined for future commercialisation as part of a new Pork CRC project moving to 3D imaging cameras for lean meat yield estimation as an alternative to laser light striping to improve system robustness.

Big data:

APL has invested in an integrated system (Microsoft CRM) to manage its "big data" systems. CRM is an innovative tool that combines the organisations various contact databases, PigPass, APIQ, SharePoint, the new TT&A App, Muddy Boots (the online auditing tool), Physi-Trace, events management system, survey tool, and a shopping cart. CRM continues to be a point of innovation.