



The business of environment and water

**FINANCIAL
ECONOMIC
ENVIRONMENTAL
SOCIAL**



P s i - D e l t a



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WE CONTRIBUTE TO OUR CLIENTS' SUCCESS BY PROVIDING A SPECIALIST CONSULTANCY IN THE BUSINESS ASPECTS OF WATER AND ENVIRONMENTAL ACTIVITY

“Understanding, business acumen and action”

Psi-Delta specialises in the commercial aspects of water and environment projects and the practical implementation of these projects. That is, we complement the work of engineers, scientists and other technical specialists by providing financial, marketing, environmental, economic and social analysis. We understand the engineering and science aspects of our work and how this relates to the financial, economic and social issues. Our focus is on outcomes such as producing improvement or the realisation of projects. If we do other work such as feasibility studies we do so with the practicalities of implementation in mind. We assess the value of our work primarily in terms of the commercial benefit of the work for our clients. Our clients appreciate this approach and respond with continuing work for us.

SINCE OUR FORMATION IN 1991, PSI-DELTA HAS BEEN BASED IN MELBOURNE, BUT WE WORK MOSTLY IN OTHER PARTS OF AUSTRALIA AND IN SOUTH EAST ASIA

Who we are

Our team is made up of people with a range of qualifications and experience but with a strong technical and business bias. The business has had a continuing association with agriculture and regional Australia, particularly the highly progressive areas such as irrigated horticulture. We apply a business focus to both our public and private sector clients.

We work in association with a range of other businesses that include some of the largest Australian and international engineering and environmental firms. Our subcontractors are selected to meet our requirements for commercial focus and quality of outputs. Innovation and creative solutions is an important part of the way we work. Most importantly, we produce creative solutions to client business problems.



OUR FOCUS IS TO ACHIEVE PRACTICAL OUTCOMES TO COMPLEX PROJECTS

Feasibility Assessment

Psi-Delta has conducted feasibility studies for a range of agricultural and water projects (\$5-700 million) covering complete financial, institutional, social, economic and strategic planning elements of projects. We have an implementation-based approach to projects, following them through from the feasibility stage to marketing and actual development of schemes. Work is completed with an accuracy and reliability that enables clients to commit significant expenditures for infrastructure based on the data in our results.

ECONOMIC ANALYSIS MEASURES THE BENEFITS OF A PARTICULAR PROJECT, THAT IS, WHAT INCOME AND EMPLOYMENT BENEFIT THE PROJECT WILL PROVIDE

Business Planning

Our approach to business planning incorporates economic, financial, environmental and social analysis. Good economic analysis serves to convince community and Government that the project deserves support. Social impact extends the economic analysis to examine the impacts the project might have on communities. Social impact analysis can address issues such as changes in socio-economic structure and local living conditions as well as human responses to change and cultural and political impacts.

A financial evaluation applies a commercial evaluation of the project that reflects the true financial costs of the project or proposed scenarios, as would be required for investors or participants. The benefit of this analysis is that it is a transparent process, which does not artificially separate capital from operating and other costs.



OUR MARKETING AND SALES PROGRAM CAN ENSURE
A CERTAINTY OF PROCESS AND REALISE GREATER
VOLUMES AND PRICES

Marketing and sales

We have planned and implemented successful sales of water for new and augmented irrigation schemes. Clients ask us to follow up our feasibility assessments with actual marketing and sales programs. Through our expertise, clients have achieved volume and price on sales beyond expectations. Our market research methods include telephone interviews, shed meetings (focus groups) and personal interviews. This market research identifies customer needs and establishes community links for subsequent marketing programs. We have done more irrigation project marketing than any other firm in Australia.

PROGRAM EVALUATION INVOLVES COLLECTING
INFORMATION ABOUT A PROJECT OR SOME ASPECT OF
IT IN ORDER TO MAKE NECESSARY ASSESSMENTS AND
DECISIONS ABOUT THE PROGRAM

Strategy and Evaluation

We have the ability to define problems, collect data relevant to the problem, analyse and evaluate results with stakeholders and then provide clear recommendations and cost/benefit analyses. Our data collection involves fieldwork and consultation with various stakeholders such as landholders, water authorities, catchment management authorities and other agricultural businesses and representatives. Program evaluation often involves survey and benchmarking work. Our analysis methods include conceptual, structural, statistical and financial models. These models enable all aspects of the program to be evaluated, including the possible influence of external factors.

EXPERIENCE

THE PAGES FOLLOWING DETAIL PREVIOUS
PSI-DELTA WORK UNDERTAKEN THROUGHOUT
AUSTRALIA.



Feasibility assessment

SOUTH EAST QUEENSLAND RECYCLED WATER PROJECT

Project brief

Feasibility including market, social, economic and financial assessment of developing a \$800m project to recycle all (100,000 megalitres+) of Brisbane's wastewater to distribute it to the Lockyer Valley (mainly vegetable farmers) and the Darling Downs (mainly cotton and cereal farmers).

Psi-Delta role

Psi-Delta managed the overall project, wrote the final report and produced:

- Market survey of 3,000 landowners in an area of around 15,000 square kilometres in two of Australia's most productive farming areas to produce data that allowed engineers to accurately cost infrastructure requirements; and
- Contribution to the two major elements of work that we sub-contracted, the financial and economic assessment. Psi-Delta also completed the social impact assessment.

What we achieved

Earlier studies by several firms of large international engineering and business consultants had not established the critical parameters of demand, volume/price nor had they produced funding requirements or established sources of funding. Our price sensitivity and full treatment of costs provided the client with a realistic commercial appraisal of overall feasibility and its financial, economic and social costs and benefits.

Through better definition of the performance specification of the pipeline and the market for water we were able to achieve around 20 percent cost savings in the pipeline development costs through a value analysis process.

Intensive work with water user groups produced accurate and detailed data on demand and pricing along with rich contextual information.

Marketing and Sales

VIRGINIA PIPELINE SCHEME

Project brief

The Virginia project is Australia's most significant water recycling project and the first irrigation project to be developed under a Public Private Partnership.

The project brief arose from the need to successfully develop an irrigation project that would achieve economic, environmental and social benefits by diverting water to vegetable farmers who were then dependent on depleted and saline groundwater. While the engineering issues were relatively straightforward the commercial aspects of the project were complex. Negotiation of agreements between four and in some cases five parties and the sale of sufficient volumes of water to farmers for a fair price were the most significant challenges.

The project was run on a limited budget so there was a need to achieve cost effective outcomes. Further, the project was required to produce several outcomes that were firsts, the first set of supply conditions for a private provider of irrigation water and for a recycled water scheme, significant sales of water prior to a scheme being built and a suite of agreements that provided the structure for the Public Private Partnership.

Psi-Delta role

Psi-Delta worked as project co-ordinator for the project, conducted negotiations with farmers, Government and other organisations on behalf of the client, conducted market research and all marketing, established supply conditions and set up the irrigation business, WRSV.

The supply conditions negotiated with the customers were based on an optimised scheme that achieved the maximum volume of supply to customers at the least cost while providing certainty of cash flow to the operator and certainty of volume and quality to the customers.

As the first recycled water project that developed use of water for customers irrigating salad vegetables and other crops eaten raw, overcoming customer, retailer and community concerns was an important issue.

What we achieved

The Virginia project had been considered for around 20 years at the time Psi-Delta was first involved in the project. It was the marketing and other commercial aspects of the project that produced the breakthrough that allowed the project to be developed. The contracts obtained from customers also provided the main security for project borrowing. The Virginia project is one of the largest high quality recycled water projects in the world and the largest in Australia. The 22,000 megalitre scheme has produced significant economic and environmental benefits.

As result of our work on this project in particular, Psi-Delta was awarded the 2004 ANCID Irrigation Award for Working Relationships in the Water Industry.

Business Planning

EASTERN IRRIGATION SCHEME MELBOURNE

Project brief

Feasibility including market, economic and financial assessment of developing a \$20m project to recycle 5,000 megalitres of Melbourne's wastewater to distribute it to vegetable growers, golf courses and other recreational and domestic applications south east of Melbourne.

Psi-Delta role

Psi-Delta had a dual role of:

- Coordination of a feasibility study and contribution to this study including market assessment, economic evaluation and risk assessment; and
- Development of water contracts for farmers, sales of water.

In addition, Psi-Delta managed and conducted the preparation of the Environment Improvement Plans (EIPs). These were required by the EPA and the work included:

- Meeting with individual landowners and assessing property for compliance with the EPA guidelines "Environmental Guidelines for the Use of Reclaimed Water";
- Preparing property plans and irrigation and drainage layout plans;
- Coordinating soil testing and profile testing for salt and nutrient baseline levels; and
- Completing a water budget and nutrient input balance for each property based on the anticipated crop mix.

What we achieved

The feasibility study demonstrated the practicability of the project, being the first recycled water project in Victoria to use Class A water (<10 E-coli/100ml). The report also set out the project structure under a Public Private Partnership.

Water sales exceeded targets by 20 percent.

Psi-Delta successfully completed on-farm EIPs for all properties receiving recycled water. Through consultation with the EPA we resolved non-compliance issues to ensure properties that had signed contracts were able to receive water.

Strategy and Evaluation

EVALUATING WATER USE EFFICIENCY PROGRAMS VICTORIAN CATCHMENT MANAGEMENT AUTHORITY

Project brief

This project was an assessment of water use efficiency (WUE) incentive programs running in the CMA area since the early 1990s. Significant activities undertaken in the region include training programs, financial incentives, strategic planning and the implementation of regulations with the aim of reducing the impact of irrigation practices on the Murray River and other sensitive environmental areas.

Psi-Delta role

Psi-Delta was the lead consultant and project manager for the evaluation study. Taking into account the logic for why activities have been undertaken, the project incorporated an evaluation of intermediate data where the impact of activities cannot be directly attributed to environmental condition change.

The evaluation consisted of three main tasks:

1. Evaluation of the overall and relative success of each of the programs;
2. Comparison of the effectiveness of each of the components of the programs in achieving their desired outcomes; and
3. Strategy and recommendations for targeting future initiatives and incentives.

What we have achieved

Collection of data involved a literature review including an analysis of financial records, workshops and individual interviews with irrigators and non-irrigators. To assemble and compare information the methodology made use of modelling techniques.

Statistical model – provided the framework for assessing physical impacts of water use efficiency incentives. The model considers the range of inputs and outputs to provide comparison of impacts.

Conceptual model – used to obtain an appreciation of the forces/factors, interrelationships and strength of effects of initiatives on the desired outcome of improved water use efficiency.

Financial model – assessed the financial costs of activities and provided the inputs to perform a cost-benefit analysis.

The incisive analysis indicated how to obtain best value for environmental expenditure and the business model proposed indicated how efficiencies might be achieved in future expenditure.

Sustainability reporting

SUSTAINABILITY REPORT FOR A LISTED COMPANY

Project Brief

The client required the inclusion of a sustainability report to form part of their annual report.

Sustainability reporting adds to financial reporting by describing the performance of the business in:

- Environment – what environmental impacts the business and its products have and how these might be superior to other options;
- Economic – impact on regional and state economies; and
- Social – impact on communities where product is produced or used.

In addition, sustainability statements can support marketing efforts through the cost savings and consumer preference for sustainable products.

Psi-Delta role

The role was undertaken solely by Psi-Delta.

What we have achieved

The sustainability report formed part of the annual report and set out the sustainability aspects of the products in a two page section in the annual report. The content focused on the opportunities for energy savings from company's technology. Graphics were prepared and included.

To support the sustainability statement, an analysis was made of the sustainability of the company's business and its products. The positive nature of the report enhanced the standing of the company both to shareholders and potential customers.

FOR MORE INFORMATION ON PSI-DELTA'S
RELEVANT EXPERIENCE PLEASE VISIT OUR
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