



Serving Two Masters: Observations and recommendations on the transfer of tourism research into industry.

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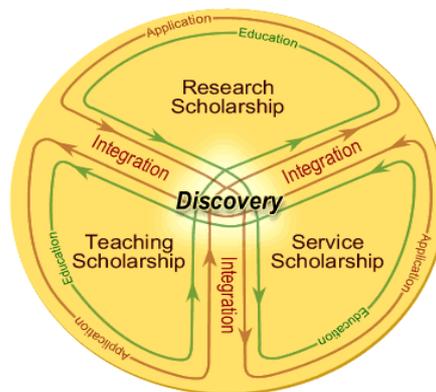
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Abstract

This introductory paper canvasses some of the issues that surround the passage of academic research into practices throughout the New Zealand Tourism Industry¹. It contrasts views expressed by the Industry with those of a sample of professional researchers who have received public funding for tourism research over the period 1996 to 2003. The paper makes a number of recommendations to improve the transfer of tourism research to industry.

Knowledge Transfer

The subject and practice of knowledge transfer is a broad subject and according to one commentator 'deserves some proportion of the enormous effort now expended on accounting, financial analysis, capital investment and the vast infrastructure devoted to sheer money – since we are in an age when knowledge has surpassed capital as the strategic factor for driving the global economy' (Halal)¹. Institutions such as universities have had a historical challenge to both create and disseminate knowledge and it is almost universal that their attempts to do so attract comments from industry as to its practicality. Another commentator (Hawkins, 2004)² recently presented a model, below, that described the operational role of higher learning institutions through service, teaching and research.



Higher Education's Role in Transferring Knowledge into Practice

Of particular relevance to this paper is the application of knowledge layer that surrounds the scholarship traditionally performed by professional researchers – or those training to be! Hawkins differentiates the application layer from the others by stating that groups, organisations, community, government or emergent societal issues define the agenda for scholarship. This paper examines the interactions between researchers and the industry in this context within New Zealand's tourism industry.

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¹ In this Paper, the term 'Industry' refers to all facets of Tourism; 'Sector' refers to elements within the Industry



Background

An industry consensus developed over the late 1990's for recognition of tourism commensurate with its growth in the New Zealand economy. There was a widely held view within the industry that a contribution of \$3.121B from exports (TSA, 1995)³ is sufficiently large to attract national respect. In particular, the 1995 Tourism Satellite Accounts (TSA) reported that the tourism industry's contribution to GDP exceeded many sectors within the agriculture industry such as forestry, seafood and meat. This fostered optimism that even the largest export sector, dairy, was not of a scale beyond the reach of tourism's growth (TSA, 1995)⁴.

This industry consensus took form through consultative processes that gave rise to the publication of the Tourism Strategy 2010 (TS2010) in May 2001. This stated that 'Tourism research and information is not making the contribution it could to sector successes' (TS2010, 2001)⁵.

TS2010 acknowledged Tourism as a knowledge and information-based industry that had suffered a mismatch in some areas between available research and sector needs (TS2010, 2001)⁶. In doing so, TS2010 highlighted the essence of the issue: i.e. the tensions between implementation of existing research, generation of new knowledge and targeting the stated as well as actual needs of the sectors within tourism.

Identifying available research has been a difficult task, but this has paled into lesser significance compared with the task of discovering what the industry actually needs or understanding what it believes it needs.

A partial solution to this was achieved through the establishment of the Tourism Research Council shortly after the release of TS2010. The Council's secretariat was the Office of Tourism and Sport (later to become the Ministry of Tourism) and its membership was appointed by the Minister of Tourism. Its immediate role was to assume responsibility for the governance of national tourism statistics produced by Statistics New Zealand. These statistics were various time series of visitor data arising from international and domestic visitor surveys as well as the preparation of Tourism Satellite Accounts for years beyond 1997. In addition, the Council took an interest in the research budgets of other government agencies – notably the Foundation for Science, Research and Technology (FRST - the funding arm of the Ministry of Research, Science and Technology (MORST))⁷ which had been funding a number of tourism research projects since 1995.

As recommended by TS2010, the Ministry of Tourism was formed in 2002. The Ministry created additional capacity for research into public good issues affecting people, infrastructure and economic outputs as its funding increased.



The Environment.

In New Zealand and numerous other countries, the tourism industry is characterised by a large and often unspecified number of small and medium businesses along with a well defined, smaller number of much large businesses; some of which are public and a few are listed. For the smaller enterprises, their business focus is well spread, but generally in sectors with the lowest barrier to entry: accommodation, services, cultural and adventure tourism. The larger enterprises are generally found in the major accommodation, air and surface transport, attractions and shopping sectors. Overall, there are, perhaps, about 10,000 enterprises (TIANZ, 2001-2004)⁸, that specialise in tourism. Whilst definitive studies have yet to be done on the matter of revenue and value distribution (TS2010, 2001)⁹, it would not be unusual if a nominal Pareto relationship existed: '80% of revenue generated by 20% of businesses'. If this were so, approximately \$5.9B would be generated from international visitors by 2,000 businesses and a further \$1.5B generated by 8,000 businesses (TSA 2003)¹⁰.

Also, within New Zealand, there are 8 universities as well as 26 other tertiary institutions plus a few private tertiary education providers that can collectively confer over 45 tourism specific degrees or diplomas (NZQA, 2004)¹¹. All of these predominantly public-funded institutions have potential to focus some research resources on facets of tourism. Recently, the concept of performance-based research funding has been introduced to reward research activities of national and international importance and provide incentives to tertiary education organisations to concentrate their research around areas of excellence (TEC, 2004)¹². TEC expects that the behaviour of these institutions will change and they will produce outputs that are fruitfully balanced between teaching and research production.

There are also a few private sector enterprises in NZ that specialise in research and one was included in the survey (CRESA). These enterprises may also access the public good funding streams from FRST or other government agencies.

It is also important to note that there is a significant public sector involvement in tourism: both explicitly and implicitly.

Explicitly, central government funds the promotion of tourism off-shore in recognition of market failure by the private sector and does so through general taxation rather than industry levies. In addition, central government funds national parks from general taxation augmented by a small proportion of usage-funding from tourism businesses accessing these parks or similar Crown estates. Similarly, local government sectors via its territorial and regional authorities are involved in activities associated with local destinations (WTO, 2002)¹³ – notably regional marketing, visitor information and in some other cases, ownership and operation of visitor products. Some local government agencies fund these activities through targeted rates that impinge on tourism enterprises.

Implicitly, local government is a party to tourism under the broad ambit of hospitality and the obvious fact that community resources are also shared with visitors which should be both planned and dimensioned with this in mind.

It would appear from this overview that there are many communities of providers and users of research, but to what extent do they interact?



Current Situation

At present, there are four streams of activity that might broadly be regarded as research. There is the provision of core data, formally funded research via government agencies, research conducted within educational programmes and private research funded by enterprises. There are also three broad priority streams for this research: TS 2010 published priorities, FRST guidelines and Institutional preferences pursued by both universities and enterprises.

1. **Core Data:** The provision of core tourism data by the Ministry of Tourism and its predecessors is exemplary by world standards. Provision of up-to-date, publicly accessible core data that ranges from Tourism Satellite Accounts through to visitor surveys, accommodation monitors and arrival and departure data is a hallmark of NZ. Whilst other countries provide similar information, few do so comprehensively and on as regular a basis. This data is publicly available via the Tourism Research Council Website (TMT, 2003)¹⁴ and its scope will not be covered here.
2. **Research via Government Agencies:** FRST and more recently, the Tourism Strategy 2010 implementation fund are two principal funding providers that the industry can access. FRST allocates approximately \$400m annually to a wide range of research providers (the majority of which are Crown Research Institutes) via a series of thematic classifications called output classes. Tourism's output class also includes the manufacturing sector; a linkage regarded by many in the tourism industry as unhelpful. Tourism's annual FRST allocation has generally been less than \$1.5m. The TS2010 Strategy Implementation Fund administered by the Ministry of Tourism under the delegations of the Ministers of Tourism and Finance may also be used for purposes that advance the objectives of TS2010. So far disbursements have been made for the provision of additional core data, capacity building and infrastructure leadership within the public sector (including the local government sector) and more recently, research to implement TS2010 Recommendation #29 through a Public-Private partnership. Overall, tourism specific research funding outside of the provision of core data is estimated to average \$2m per annum since 2000.
3. **Institutional Preferences**
 - a. **Research within Educational Programmes:** are the traditional mechanisms for graduates and postgraduates to choose research programmes that are funded via fees or supplementary grants from the Universities. This paper will not dwell on the components of this research, but notes that researchers have considerable interaction with both industry and visitors.
 - b. **Private Research:** is divided into research that is proprietary and public/quasi-public. For instance, enterprises wishing to introduce new products, seek resource consents or extend their operations may engage researchers to address issues - the results of which generally remain proprietary unless disclosed through a legal context. Public or quasi-public research is conducted for Industry Associations by professional researchers to address issues that confront their Membership. Such research might stem from TS2010 (e.g. Skill and Human Resource Dimensioning) or issues of a significant national or



global nature (e.g. The Kyoto Protocol’s Impact on Tourism) and is generally available to the public after a period of time.

TS 2010 identified many areas for knowledge expansion and made the following research recommendations (TS2010, 2001)¹⁵:

- Establish commitment to fund the core data set for a further 5 years
- Improve the level of public research funding applied to tourism research (on the basis of comparison with other sectors with comparable economic contribution)
- Improve the quality and integration of the core data set to support effective sector analysis.
- Assign clear accountability for specific research requirements.
- Ensure appropriate funding for publicly-funded applied research that is focused on the needs of users and is widely disseminated.
- Improve levels of information regarding Maori in tourism.
- Collect, analyse and distribute widely across the sector, information to support a better understanding of visitors’ needs, preferences and behaviours.
- Prepare guidelines on presentation and dissemination of research.
- Exploit technology and other media to increase the accessibility of research, including private sector research, to users.

Up until July 2003, research themes aligned to these recommendations had not been formally identified and there was no prioritisation in place to assist applicants for research funding. The Tourism Research Council addressed this deficiency and developed a set of strategic themes during 2003 to provide guidance for applicants to the annual round of the public good science fund. These strategic themes were (TMT, 2003)¹⁶:

Strategic Themes	
<u><i>Economic</i></u> Human resources Tourism economics	<u><i>Social/Cultural</i></u> Extracting value from ‘the cultural dimension’
<u><i>Environmental</i></u> Inter-relationship between tourism and conservation lands	<u><i>Performance Assessment</i></u> Visitor satisfaction
<u><i>Host Communities</i></u> Host community support for tourism	<u><i>Synthesis</i></u> Impediments to sustainable tourism growth

These were the first research priorities established since TS20100 and are current (as at mid October 2004). The research genre, whether pure or applied, was not stated by the Research Council but there was an expectation from private sector members of the Council that research outcomes should be applicable within a timeframe of perhaps one to two years. The historical



average time span of publicly funded tourism research is about four years so industry's expectation for practical results in half of that time would be a challenge to the research community and impede pure research programmes.

Industry also noted difficulties in accessing existing research. The Ministry of Tourism has addressed this by compiling a reference database of historical research titles and publishing a search process on its website (TMT, 2004)¹⁷. The question remains as to the use industry makes of this excellent and accessible resource.

Soon after the release of TS2010, TIANZ (Moriarty, 2001)¹⁸ identified its priorities and championed for other high priority recommendations to be embraced by the research community. This resulted in either endorsement for, or collaboration with a number of organisations to deliver against some or part of the recommendations. In most cases the applications for publicly funded research after the publication of TS2010 were reviewed by TIANZ on behalf of the Industry. However a number of long-standing or continuing applications for public funding ceased to be supported by TIANZ if they were unrelated to TS2010.

Industry's perceptions towards Research

Organisations supplying services to the tourism industry will quickly discover that the industry has long periods of short 'attention-span'. The industry is seasonal with the ratio of international arrivals between the worst and best months in calendar years 2000-2003 lying in the range of 36% to 46%. The worst month, usually May, exhibits a rapid collapse of arrivals and continues in similar vein for a further two months. Outside of this period, the attention-span of the industry is low hence progressing matters other than those of immediate business relevance is challenging. Added to this has been the uncertainty of market support for New Zealand. Whilst history has recorded NZ's visitor arrival performance as enviable, it certainly did not look that way at the time with 'September 11, SARS and the Gulf War' providing ample reason to focus on short-term profit protection measures. Industry and its professional researchers should make better use of the low season to advance a common understanding of the projects they need to address.

Another important factor for tourism enterprises is 'timeframe'. Regular collection of visitor statistics and their publication, some on a weekly basis, contrasts with the months and years of work associated with formal research. This has led to the perception that by the end of a formal research process, any value will be passé. Clearly this is not the case, but as before, tourism businesses operate in a seasonal market where time horizons are generally short. One of the most frequent disenchantments expressed about 'academic research' was its perceived inability to deliver value within timeframes of practical use to business.

Alongside these attitudes towards research were other diametrically opposite attitudes supporting commercialism, for example: Tourism Awards, Tourism Conferences, Tourism Trade Events, etc. The level of voluntary contribution towards these is difficult to gauge precisely but is estimated at between \$3m and \$4m per annum if both cash and opportunity costs are counted – a sum exceeding average annual public expenditure on tourism research. Such contributions are deemed to be sponsorships with an associated benefit stream such as promotional rights arising from the money or equivalent supplies advanced.

Of course commercial enterprises do fund activities that they would describe as research. These include: feasibility studies, new product plans, market research, customer research, competitive research, process improvement, etc. In each of these cases the outcomes are almost certainly proprietary. A notable exception to this is Air New Zealand. Air New Zealand not only supports



the industry on a tactical level through sponsorships but also spends between \$55 and \$70m per annum on product positioning and promotion (Air New Zealand, 2003)¹⁹, much of which is generic to the industry.

There is also a widely held view that the overall Industry is vulnerable to poor performance or un-professionalism from any enterprise since everyone shares customers. There is considerable agreement throughout the industry that quality or consistency of service is important. There is less agreement about the best way to achieve quality and consistency, particularly if it involves compliance costs.

There is a paradox here. There is a clear distinction in approach between funding proprietary versus shared research but it contrasts with general agreement that it is in the best interests of the overall industry that customers are carefully targeted and receive excellent services despite the fact that the most appropriate funding and delivery mechanism for achieving this is not agreed.

TIANZ operates on behalf of several thousand tourism enterprises (both public and private sector) and has solicited financial support from its membership for a broader portfolio of research than that being funded solely from the traditional public agencies.

Specifically, TIANZ identified three imperatives for either original or applied research from TS2010 recommendations. These were Skill and Workforce Requirements, Drivers for Financial and Economic Sustainability and the provision of Tools and Templates for Small and Medium Businesses (Moriarty 2001)²⁰.

Whilst pursuing these imperatives, TIANZ gained an appreciation of the views of its own membership as well as those of the wider industry towards research funding and the application of its outputs. Feedback gathered between 2001 and 2004 from the higher revenue achieving enterprises who were members of the Association revealed the following attitudes:

- Proprietary and competitive interests generally preclude funding projects that share outcomes with others
- Moral hazard, i.e. “We’ll get it anyway if someone else funds it”
- Broad satisfaction with public statistical information as being both relevant and appropriate for immediate business needs
- Disenchantment with academic research that takes years to complete and dissipates value along the way so as to be passé on completion
- Aversion to funding research that seems difficult to apply to ‘their business’
- A widely held view that any research that is shared should be funded by government or industry organisations
- Perception that entrepreneurial insight is superior to systematic insight (or analysis)
- Impatience and frustration with forums that included participants not explicitly engaged in commercial trading – i.e. specifically the universities and public sector
- Surprise when advised that some pertinent topics had actually been researched and the results were readily available.

During this period of feedback, it difficult to cite any notable tourism research initiative that was either initiated or championed outside of industry associations, tourism related academia (including private sector researchers) or the public sector. Outside of Government, the largest



projects implemented or launched over the period 2001-2004 were the three priorities of TIANZ: the delivery of Tools and Templates for Small and Medium Businesses was funded entirely by TIANZ and co-funding mechanisms via public-sector/private-sector partnerships addressed the remaining two; Workforce and Skills Requirements (principally funded by industry) and Financial and Economic Sustainability (principally funded by government).

Surveying recent public good research

The history of tourism research in New Zealand is beyond the scope of this paper, but it is important to examine some of the more recent projects to understand how they formed, the attitudes and motivations of the researchers and how their results have been disseminated.

Projects chosen for this survey were funded by the FRST Public Good Science Fund under the Output Class 7.2 – Manufacturing and Services. The scope of the survey extended to Tourism-specific projects that commenced on or after 1995. The list of these projects is included in Appendix 1A.

Not included were FRST funded projects peripheral to tourism – such as the behaviour of fish (trout) or insects (wasps).

The research titles chosen for this introductory study were those patently applicable to numerous sectors and geographies of the industry. There were 9 of these; 8 Tourism and 1 Transportation research provider for contrast. Their FRST Contract Codes are in Appendix 1B. Those sampled received overall funding of \$4.2m - 31% of the total disbursed by FRST towards tourism research over the period 1995-2003.

Researchers were invited to complete a questionnaire, included in Appendix 2, which examined the following project phases:

- Inception and formulation
- Application for FRST funding
- Implementation
- Publication
- Post Publication

Survey Responses.

Overall findings:

- Inception and formulation.

The initial driver for the research usually arose from the researchers themselves as a result of their affinity with current trends (both local and international), changes in central or local government policies or an occasional suggestion or extension of earlier interests. Assistance in forming bids generally came from within their organisation or via networks of colleagues. Researchers also discussed matters more broadly within the industry either at an industry association, RTO, government agency or operator level. Generally the overall level of participation from others at this stage was low and half of those surveyed indicated that they would probably have continued without the support of the Industry. As a consequence, there was little change or perhaps minor refinement to the research proposal itself. In two cases the manner of implementing the proposal altered significantly to accommodate industry interests (e.g. case-study area selection) as a result of external industry influences.

- Application for FRST Funding

Preparation of the proposal generally took about 3 months of elapsed time with between 2 and 6 weeks of work. There may have been a wish for co-funding, but no respondent really expected any and there were only a few reports of assistance in kind (air fares, database access to names, etc). Where support was received, it seldom amounted to more than a few percent of the total project cost. Collaboration, if it occurred, was with colleagues or other researchers. Applicants usually obtained references from stakeholder groups and most had done so purposefully. The most emphatic of responses was from the contrasting transport researcher who explained that project objectives were fully discussed and developed with nominated supporters.

Researchers were all members of a recognised stakeholder group such as TIANZ or Roothing NZ and all, save one, had previously received a FRST grant. Some respondents had received four or more FRST grants. When asked to explain the root cause of success or previous failures, there were mixed responses. Lack of alignment of FRST criteria to tourism, in-experience with application processes, in-appreciation of the objectivity that researchers might bring to a problem were cited as factors associated with failure. One or two respondents having extremely good histories of success, cited what amounted to a professional approach to the task: knowing the process, how to address the criteria and involving the appropriate stakeholders.

- Implementation

Research timeframes varied from 2 to 8 years with the average of 4 years. A number of projects were extended by between 1 and three years. Originally, all projects were funded for no more than 5 years.

Reporting progress fell into two categories: those who only met the essential FRST criteria of annual reporting and those who also provided stakeholder and industry progress reports (either via presentations/seminars, workshops, conferences or newsletters).

The average reporting period was annual – except for one researcher who provided approximately 6 stakeholder outputs per year over an 8 year period. Not all projects had a feedback mechanism, but those who did noted that the impact of feedback often altered the manner of current and future research.

The use of electronic feedback mechanisms such as a web-site was used by half of the respondents. Of those who did not use a web-site, two stated that the facility was in place for the future.

All respondents reported that the research was completed either within time or financial budget. For those finishing on time, one required some additional university research funds and another noted that the effort was well in excess of plan. All but one of the respondents reported that their project tracked within financial budget.

Programmes for early uptake of the research varied: those having the most comprehensive feedback mechanisms (a minority) reported that there was some interest from the workshops, seminars or advisory boards they interacted with. The remainder expressed either disappointment with their stakeholders or simply did not have any implementation programme in place at all.



- Publication

All research was published through mechanisms that included both industry and academic readership. Printed copies of the research numbered in the hundreds or in some cases thousands for each project and efforts were clearly made to disseminate copies to all prospective users at either no charge or nominal cost.

Where copies were sold, reported sales were between 30% and 50% of the total printed.

All researchers engaged in some post-research dissemination through conferences or seminars and one also reported receiving 60 direct requests from operators for additional information.

Evidence of the research actually being used was reported from all except one whose work was substantially 'still in progress'. The majority of references to usage involved academia (through citation) and associations or local industry or public sector agencies such as Department of Conservation, Territorial Authorities and Rating NZ. Specific industry uptake was mentioned by only one respondent although industry associations such as TIANZ disseminated some of that respondent's results to their sector groups and thus to the wider industry.

Post Publication

In the majority of responses, the initial research was extended after publication and formed the basis for further contracts or outputs to industry in forms such as toolkits. Half of the respondents also applied to FRST for further support and where this was done, extended the conceptual basis of the work – in either a medium or major manner.

Only a minority of respondents reported replication of the same research work, i.e. where their research protocols were applied to different situations, such as another tourism region.

Summary of Responses.

Respondents to the survey were all experienced researchers with previous history of support from public funding agencies. They demonstrated their experience by implementing their research within planned timeframes - including project extensions that were agreed by FRST, and they maintained budget in all but one case where some supplementary internal funding was used complete the project.

So far as topic selection was involved, researchers generally drew on their academic and industrial affinities for inspiration and developed proposals with what might be described as a working necessity of interaction with the overall tourism industry, but sometimes to a deeper level with quite narrow segments of a sector – e.g. rural operators. There was no evidence from this sample to suggest that there was a strategic engagement at the conceptual or formative stages of any project by the industry's major capital or revenue enterprises, but there was a consistent reliance on organisations such as an industry association (mainly TIANZ) for dialogue or support. It is noteworthy that until the release of TS2010, there were no industry guidelines available to researchers.

Applications for funding involved researchers' resources and time. The level of industry interaction varied during the bidding stage and thereafter as the project progressed. No respondent demonstrated any material degree of co-funding from industry operators or sectors – although they sometimes received support by way of expense relief where supplies were offered to facilitate



travel or communications. Some of these supplies were restrictive in that other associated costs (such as accommodation and meals) rose due to a lack of flexibility.

All respondents provided some feedback over the duration of their projects. The most minimal were annual reports to FRST as well as to stakeholders or interested parties. The most extensive involved numerous industry publications, conference papers and seminars. After completion, all respondents published their findings and generally received recognition via refereed papers, journal articles or conference proceedings. Ample publication and distribution of outcomes occurred with evidence to suggest that the work could be obtained and read by anyone wishing to do so.

Nowadays the use of web-based distribution is common, but some of the earlier research was not web-accessible, although the majority of respondents reported that they could do so now. Cost recovery pricing-principles were applied if there was any charge for a publication such as a book or report.

Pleasingly, the respondents reported that their research work had been used, mainly in the public sector or by academia. There were reports of the work being used by industry associations on behalf of industry, but no specific reports of private sector uptake. It cannot be inferred that the private sector did not use the research, but rather that there was no citation of this having occurred.

After the conclusion of the project, most respondents extended their work in some manner, often through other related research projects funded by FRST. This is consistent with the degree of independence often shown during the formative stages of the research - namely that researchers exploited opportunities or knowledge gaps in the industry.

Conclusions and Recommendations.

As a result of this survey a number of preliminary conclusions arise from the combination of the views held by the industry (industry operators) and respondent researchers.

Industry does not indicate willingness to support tourism research to the extent of matching public sector funding, i.e. between \$1.5m and \$2m per year.

Industry does patronise many tourism activities, often very generously, but mainly those offering business advantage such as products or well-defined sponsorships or promotional opportunities having measurable outcomes. To date, industry articulation of research needs – as opposed to the need for periodic statistical information - has come mainly via industry associations or as part of representation on the Tourism Research Council. Industry funding of research has only occurred in recent times via their membership of TIANZ who has also acted in conjunction with government (and other associations) via public-private partnerships.

In contrast, this paper suggests that researchers have been the initiators of research priorities and have demonstrated a track-record of successful delivery against their objectives, but have done so without creating a collaborative framework that leads to a rising trend of industry participation. Research timeframes have generally been benchmarked against academic performance – from two to four years – and there has been some scepticism from the research community as to whether this can be accelerated.

Developing a consensus on research priorities has not been straightforward. It is noteworthy that the Tourism Research Council itself took over two years (until July 2003) to publish a set of research priorities that had their provenance in TS2010 and did so only just in time for the 2003 FRST application round. TIANZ selected three priorities from TS2010 – two of which stimulated



original research projects and launched them via funding partnerships with Government and its members.

Clearly on-going confirmation and communication of the Tourism Research Council's priorities should provide a safer haven for researchers in the future.

Drawing on the propensity of industry to fund against perceived business value, one objective would be presenting research in a framework that does just this and does so whilst recognising that industry's attention-span is very short for most of the year.

If research is also destined to be funded equitably from both public and private sectors there needs to be a perceived business advantage to attract participants. The quality of the research should benefit from synergy between the needs of industry and the additional resources they offer to researchers. Additionally, any increased volume of relevant research opportunities should also establish greater overall human capital and capacity within the tourism research community and industries themselves.

Tourism research will generally be made public on its completion and industry funding partners who also participate in work in progress must have the option to develop their people and processes as learning emerges. Since publicly funded research has a regular reporting programme any 'exclusive' advantage accruing from such participation will be limited the period preceding a reporting milestone. Even so, the potential to transfer knowledge – throughout the process - to participating businesses is significant and consistent with the recommendations arising from the recently completed Tourism Workforce and Skills Projections (BERL, 2004)²¹.

Finally, the key recommendations for improving the transfer of research to industry are:

- Industry recognition and acceptance that contributions from the publicly funded tourism research practitioners sampled have been both pertinent and professional. They have also delivered against their objectives on time and within budget. The research community offers services that are not normally found within NZ's tourism trading enterprises and researchers need to be engaged so as to retain capacity to address the industry's knowledge needs.
- Industry recognition and acceptance that envisioning research or articulating problems is not solely their forte. Inclusion of research scenarios into the business planning processes should be practiced by public or listed companies together with all other large private enterprises that are re-investing for growth. It is recommended that leading sector businesses include the research community in these processes.
- Research needs to be balanced between pure and applied as each genre addresses different problems within the industry. An industry preference for only applied research exposes the industry to potentially diminishing competitive advantage over the longer term.
- Industry participation in research must be associated with identifiable business advantage. Participation in the formation of the research objectives and subsequent work in progress at a tactical level (or at least at an advisory level) is one way of developing business advantage through knowledge transfer.
- Researchers should embody 'knowledge transfer products' as part of their proposal for business support. These products should be properly managed and surrounded with a support philosophy akin to that offered by industry to visitors.



- Research timeframes need to be re-visited in the short term. The contrary expectations of researchers and enterprises as to what constitutes a suitable timeframe for research deliverables demonstrates a need for some compromise or process change that works for both parties. Staged research programmes, closer inclusion of funding partners in milestone reporting processes and broader advisory or governance representation by enterprises on projects could assuage some of the stated concerns. As greater trust develops, the issue of shorter versus longer timeframes should subside.
 - Researchers should capitalise on the longer ‘attention-span’ of the industry during the low-season.
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Appendix 1A. Public Good Science Funded 'Tourism' Projects from FRST: 1995:2003

Year	Contract	Organisation	Title	Allocation
1998	AUL801	Auckland UniServices Ltd	A Sustainable Maori Tourism for Tai Tokerau	\$172,000
1999	AUL801	James Henare Maori Research Centre, Auckland Uniservices	A Sustainable Maori Tourism for Tai Tokerau	\$172,000
2000	AULX0001	Auckland Uniservices Ltd	A Sustainable Maori Tourism for Tai Tokerau	\$172,000
2002	C09X0207	Landcare Research New Zealand Ltd	Pathways Towards Sustainability	\$120,000
2003	C09X0207	Landcare Research New Zealand Ltd	Understanding international tourist travel patterns to reduce energy use	\$120,000
1998	CAW605	Cawthron Institute	Impact of Tourism on Sustainability of Trout Fisheries	\$200,000
1997	JHM601	James Henare Maori Research Centre, Auckland Uniservices	A Sustainable Maori Tourism for Tai Tokerau	\$197,000
1995	LIN504	Lincoln University	Planning for Tourism Development	\$121,000
1996	LIN602	Lincoln University	Planning for Tourism Development	\$160,000
1997	LIN602	Lincoln University	Planning for Tourism Development	\$445,000
1998	LIN803	Lincoln University	Improved Management of Tourist Flows and Effects	\$476,000
1999	LIN803	Lincoln University	Improved Management of Tourist Flows and Effects	\$476,000
1999	LIN806	Lincoln University	Indicators of Acceptable Environmental Change	\$208,000
2000	LINX0004	Lincoln University	Improved Management of Tourism Flows and Effects	\$476,000
2001	LINX0004	Lincoln University	Improved Management of Tourism Flows and Effects	\$476,000
2001	LINX0005	Lincoln University	World Trade and the Environment	\$200,000
2000	LINX0007	Lincoln University	Indicators of Acceptable Environmental Change	\$208,000

Year	Contract	Organisation	Title	Allocation
2001	LINX0007	Lincoln University	Indicators of Acceptable Environmental Change	\$208,000
2002	LINX0202	Lincoln University	Managing Tourism Impacts on Natural Assets in NZ	\$160,000
2003	LINX0202	Lincoln University	Thresholds of acceptable environmental change and best practice policies for sustainable use of natural assets by tourists	\$86,600
2003	LINX0202	Lincoln University	Predicting impacts on natural assets resulting from tourist flows	\$73,400
2002	LINX0203	Lincoln University	Integrated destination management: Analysing flows, managing effects.	\$417,000
2003	LINX0203	Lincoln University	Mapping tourist flows, national and local scales	\$55,000
2003	LINX0203	Lincoln University	Tourist behaviours, interactions with community and community responses.	\$67,000
2003	LINX0203	Lincoln University	Tourism economics	\$31,000
2003	LINX0203	Lincoln University	Tourism and Maori Development	\$53,000
2003	LINX0203	Lincoln University	Interactions between tourists and the built environment.	\$52,000
2003	LINX0203	Lincoln University	Planning and managing tourism growth within the tourism area life cycle.	\$159,000
2003	MANA0301	Mana Taiao Ltd	Global market responsiveness	\$101,000
2003	MANA0301	Mana Taiao Ltd	Māori branding experience	\$127,000
2003	MANA0301	Mana Taiao Ltd	Māori values in the Māori business approach	\$97,000
1998	MCD801	McDermott Fairgray Group Limited	Forecasting Measurement and Modelling of Domestic Tourism in New Zealand	\$570,000
1999	MCD801	McDermott Fairgray Group Limited	Forecasting, Measurement and Modelling of Domestic Tourism in New Zealand	\$400,000
2000	MCD801	McDermott Fairgray Group Limited	Forecasting, Measurement and Modelling of Domestic Tourism in New Zealand	\$50,000
2001	MRTC0001	Martech Consulting Group	Building business capabilities within New Zealand tourism industry SME's through the adoption of information technology and e-business solutions	\$224,000
2002	MRTC0001	Martech Consulting Group Ltd	E-Business Solutions for Tourism Industry SMEs	\$224,000

Year	Contract	Organisation	Title	Allocation
1996	RES601	Centre for Research Evaluation & Social Assessment	Rural Tourism for Sustainable Rural Economic Development	\$148,000
1997	RES601	Centre for Research Evaluation & Social Assessment	Rural Tourism for Sustainable Rural Economic Development	\$172,000
1998	RES802	Centre for Research Evaluation & Social Assessment	Developing Special Interest Tourism for Local Economies	\$186,000
1999	RES802	Centre for Research Evaluation & Social Assessment	Developing Special Interest Tourism for Local Economies	\$214,000
2000	RESX0002	Centre for Research Evaluation & Social Assessment	Developing Special Interest Tourism for Local Economies	\$214,000
2001	RESX0002	Centre for Research Evaluation & Social Assessment	Developing Special Interest Tourism for Local Economies	\$214,000
2001	RESX0003	Centre for Research Evaluation & Social Assessment	Integrating ecological, economic, social and cultural (including Maori) factors in the planning and management of natural areas for tourism and other uses	\$228,000
2003	RESX0203	Centre for Research Evaluation & Social Assessment	An Integrated Model for Tourism-Related Management in Natural Areas	\$228,000
1998	STS801	Statistics New Zealand	Development of a Tourism Satellite Account	\$168,000
1995	UOA404	University of Auckland	Development of Tai Tokerau (Northland)	\$212,000
1996	UOA607	University of Auckland	Sustainable Development in Tai Tokerau (Northland)	\$200,000
1999	UOA808	University of Auckland	Sustainable Development in Tai Tokerau 1998?2000	\$210,000
1995	UOO506	University of Otago	Sustainable Tourism	\$253,000
1996	UOO605	University of Otago	Sustainable Tourism	\$300,000
1997	UOO605	University of Otago	Sustainable Tourism	\$286,000

Year	Contract	Organisation	Title	Allocation
1998	UOO805	University of Otago	Sustainable Tourism	\$350,000
1999	UOO805	University of Otago	Sustainable Tourism	\$350,000
2000	UOOX0008	University of Otago	Sustainable Tourism	\$350,000
2001	UOOX0008	University of Otago	Sustainable Tourism	\$350,000
2002	UOOX0205	University of Otago	Sustainable Tourism	\$231,000
2003	UOOX0205	University of Otago	Maori and general public perceptions of wilderness and impact	\$124,000
2003	UOOX0205	University of Otago	Performance of small tourism enterprises	\$107,000
2002	VICX0202	Victoria Link Ltd	Innovation in New Zealand tourism through improved distribution channels	\$320,000
2003	VICX0202	Victoria Link Ltd	Typologies of distribution channels	\$160,000
2003	VICX0202	Victoria Link Ltd	Distribution Channel Behaviour	\$160,000
Count = 61		Distinct ~20		Total \$13,289,000

Appendix 1B. Sampled Contracts

RES 802, LINX 007, RES601, UOO805, LINX 0202, C09X0207, OPSX001

VICX 0202, LIN504. Note OPSX001 'Sustainable Transportation' was also included from Output Class 7.3 as a contrast in feedback key (viii) of verbatim reports, Appendix 3. Also note, the contracts convention for numbering altered from time to time and successive years often received a new identification. The shading in the above table highlights the samples used for this paper. These samples represent over 31% of the funding and a considerably higher proportion of the feedback as many of the respondents were also associated with other research projects either running concurrently or as part of an overall programme.



Appendix 2: Questionnaire.

Transferring Research into the Tourism Industry or Communities

FRST Contract Number: ()

Year Contract Commenced: ()

Title of Research: ()

1) Inception and formulation of research programme

- a) How did the research concept arise? Principal reason (P) and secondary reasons (s)
- i) A Tourism Industry trading entity suggestion (P or s)
 - ii) TIANZ or industry association suggestion (P or s)
 - iii) RTO or TNZ suggestion (P or s)
 - iv) Direct extension of previous research work (P or s)
 - v) International trends (P or s)
 - vi) Strategy 2010 (P or s)
 - vii) Tourism Research Council Priorities (P or s)
 - viii) Central Government Public Policy Development (P or s)
 - ix) Local Government Activities (P or s)
 - x) Other reason. (P or s)
- b) Who else participated in the formulation of the concept up to the point of Application for FRST Funding?
There may be more than one.
- i) Industry-wide reference groups? (how many people involved and how often were they referred to)
 - ii) Colleagues within your research organisation
 - iii) Research partners in direct collaboration
 - iv) Ministry of Tourism or its predecessor
 - v) Tourism Industry Association
 - vi) Other Industry organisations – Name:
 - vii) Only the Applicant
 - viii) International Peer groups
 - ix) Operators in the following Sectors
- c) What overall level of participation was there?
- i) Low Level – general discussions as to views on the concept
 - ii) Medium Level – agreement and formal alignment of priorities
 - iii) High Level – formal co-operation and collaboration
 - iv) Other levels?
- d) What would you have done if there was little or no support or understanding from others in the Industry about your research concept?
- e) Did the research proposal change as a result of external industry influences?

2) Application for FRST funding

- a) How much preparation or lead time did you spend prior to supplying a completed application? Split into elapsed time and working time.
- Elapsed () ; Working ()
- b) What were your expectations as to co-funding from any source?
- c) Did you receive any offers of support – cash, time, materials/services, other from any other party? If so what proportion of the total cost was this support in cash equivalence?
- d) With whom did you formally collaborate to apply for FRST funding?



- e) Did you receive any written references from any stakeholder groups?
 - f) Did you assume the support of any Stakeholder Groups based on historical relationships rather than through formalised or written references
 - g) Are you a member of any stakeholder group (TIANZ, etc)
 - h) Have you or had you successfully applied for and received FRST funding before?
 - i) How many applications have been successful versus unsuccessful?
 - j) Was there any root cause to suggest either success or failure?
- 3) Implementation of the research programme**
- a) How long was the research programme scheduled to take?
 - b) How was progress reported (report method) if at all?
 - c) How many progress reports were produced over the life of the project and to whom did they go?
 - d) Was there a feedback mechanism for progress reports?
 - e) Was any feedback received? If so, what was its impact?
 - f) Was a Web site used for reporting progress?
 - g) Did the research finish on time (and within budget?)
 - h) Was there any stakeholder programme for early uptake of the research?
- 4) Publication of the research**
- a) How was the research published? (format and style)
 - b) How many copies if printed
 - c) Who (groups) were these copies sent to?
 - d) Was there a charge for the published work? If so was it nominal, cost recovery priced or profit priced?
 - e) How many copies have been sold?
 - f) Were there post research seminars, conference proceedings, etc for specific explanation of the outcomes?
 - g) Has there been evidence of the work being used:
 - i) by NZ Industry/Associations
 - ii) by NZ Academia
 - iii) by NZ government in policy, or
 - iv) by NZ government in any other form
 - v) by overseas agencies
 - vi) by anyone else
- 5) Post publication**
- a) Since publication, has there been any extension (taking the research to new levels of originality) to the work?
 - b) Was the extension the subject of a further FRST Application or not? (If so, treat as a second project)
 - c) What was the scope of the extension?
 - i) Minor – typographical, explanatory, etc
 - ii) Medium – some conceptual extension



- iii) Major – considerable conceptual extension
- d) Since first publication has there been any replication (applying the findings to new or alternative situations) of the work?



References

- ¹Halal, William E., The logic of Knowledge: How a knowledge economy differs from a capital economy, unpublished paper, George Washington University, Washington, DC,
<http://administracion.uexternado.edu.co/centros/pensamiento/matdi/Logic4.pdf>
- ² Hawkins, Donald E., Eisenhower Professor of Tourism Policy, School of Business and Public Management, George Washington University, FIRST WORLD CONFERENCE ON TOURISM COMMUNICATIONS, 29- 30 January 2004 - Madrid, Spain
- ³ Tourism Satellite Accounts, 1995, Page 12, Total Direct Tourism Demand - International Visitors
- ⁴ Tourism Satellite Accounts, 1995, Pages 12 and 14
- ⁵ NZ Tourism Strategy 2010 (TS2010), “Enabling the Sector: Research and Development Strategy”, P57, may 2001
- ⁶ Ibid
- ⁷ www.frst.govt.nz The Website of the Foundation for Research, Science and Technology
- ⁸ Tourism Industry Association NZ estimates from numerous databases and lists 2001-2004
- ⁹ TS2010 Recommendation #29, “financial and economic sustainability”
- ¹⁰ TSA 2003, Figure 1, Page 2.
- ¹¹ NZ Qualifications Authority, June 2004, ‘KiwiQuals Report’ www.nzqa.govt.nz
- ¹² Tertiary Education Commission, Performance-Based Research Fund • Overview and Key Findings, P1, April 2004
- ¹³ WTO Think Tank 2, 4 December 2002 Madrid, WORKING DEFINITION OF A LOCAL DESTINATION:
“A local tourism destination is a physical space in which a tourist spends at least one overnight stay. It includes tourism products such as support services and attractions and tourist resources within one day’s return travel time. It has physical and administrative boundaries defining its management, and images defining its market perceptions and competitiveness. Local destinations incorporate various stakeholders, often including a host community, and can nest and network to form larger destinations.”
- ¹⁴ www.trcnz.govt.nz The website of the Tourism Research Council of New Zealand
- ¹⁵ NZ Tourism Strategy 2010 (TS2010), p58
- ¹⁶ Research & Development Priorities for the New Zealand Tourism Sector, TRCNZ, 17 July 2003
- ¹⁷ Ministry of Tourism Research database <http://www.trcnz.govt.nz/Research+Index/Search/>, 2004
- ¹⁸ Moriarty, John P., Tourism Industry Association NZ, Tourism Conference, July 2001, Rotorua, , CEO Presentation
- ¹⁹ Air New Zealand, advice to Author on the component of Promotion with its Sales and Marketing expenditure of \$367.4m for FY 2003
- ²⁰ Moriarty, John P., TIANZ Priorities CEO’s Address, Tourism Conference 2001, Rotorua, NZ.
- ²¹ BERL, Tourism Workforce and Skill Projections, September 2004, Report to Funding Partners, Section 6.2, P 32