A centre of international trade and transport logistics

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Abstract
Achieving superior productivity and growth, and understanding how to best manage cost-efficient, environmentally-friendly modes of integrated transport is of vital importance to a nation's strategic interests. Yet in an era of increasing sensitivities toward greenhouse gas emissions and the 'greening' of business many countries lack educational facilities which are dedicated to understanding multi-modal transport logistics and sustainable supply chains that can extend to international trading partners. This paper explains in detail a proposed centre of excellence concept that was developed for the New Zealand Chartered Institute of Logistics and Transport (CiLT). By facilitating intensive business collaborations and engaging industry directly with teaching specialists, consultants, and researchers it is anticipated that Centre stakeholders would benefit from: 1) industry-relevant, world-class applied research and problemsolving expertise that will directly add value to the NZ national and local economies, 2) shared decision support facilities that bring together industrialists, academicians, consultants, and other specialists to work together on the most pressing export trade-related supply chain, logistics, and transport challenges and opportunities, 3) improved, industry-relevant qualifications and programmes that make extensive use of new and innovative teaching and learning methods and which are tailored to the country's international trade, transport and logistics sectors. This research brings together the views of industry, education providers, students, and governmental stakeholders. It has been informed by first-hand experience, by the literature, by international visits and by acknowledged best practise.

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Disciplines
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A CENTRE OF INTERNATIONAL TRADE AND TRANSPORT LOGISTICS

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ABSTRACT

Achieving superior productivity and growth, and understanding how to best manage cost-efficient, environmentally-friendly modes of integrated transport is of vital importance to a nation's strategic interests. Yet in an era of increasing sensitivities toward greenhouse gas emissions and the 'greening' of business many countries lack educational facilities which are dedicated to understanding multi-modal transport logistics and sustainable supply chains that can extend to international trading partners. This paper explains in detail a proposed centre of excellence concept that was developed for the New Zealand Chartered Institute of Logistics and Transport (CiLT). By facilitating intensive business collaborations and engaging industry directly with teaching specialists, consultants, and researchers it is anticipated that Centre stakeholders would benefit from: 1) industry-relevant, world-class applied research and problem-solving expertise that will directly add value to the NZ national and local economies, 2) shared decision support facilities that bring together industrialists, academics, consultants, and other specialists to work together on the most pressing export trade-related supply chain, logistics, and transport challenges and opportunities, 3) improved, industry-relevant qualifications and programmes that make extensive use of new and innovative teaching and learning methods and which are tailored to the country’s international trade, transport and logistics sectors. This research brings together the views of industry, education providers, students, and governmental stakeholders. It has been informed by first-hand experience, by the literature, by international visits and by acknowledged best practise.

KEYWORDS
Logistics Tertiary Education, Centre of Excellence, New Zealand; Proof of Concept, Thematic Analysis

INTRODUCTION

In a global climate of increased deregulation New Zealand is heavily dependent on its export trades for economic wellbeing. Global supply chains also increase pressure on the maritime haul, on port operations and on inland freight distribution; with structural changes to logistics also being caused by new patterns of freight distribution and new approaches to port hierarchy. On the other hand this presents new opportunities for exporters to differentiate their supply chain products and services, and for port operators to consider new approaches to port governance that extend well beyond the traditional port perimeter (Notteboom and Rodrigue, 2005).

This article reports on two years of research into New Zealand's transport and logistics education requirements, and the nature of the service provision. To avoid creating yet another 'laundry list' of industry needs, stakeholder attention was focused onto a concept for a national centre of excellence that was developed by the authors. This article outlines the concept and summarises the feedback that was received from a wide range of senior managers and regional policymakers.

In addition to discussions with regional and industrial representatives, the concept for a New Zealand Centre of International Trade and Transport Logistics (Deakins et al., 2009) was informed by: acknowledged global best practise; visits to exemplar organisations in Australasia and Europe; the NZ tertiary education strategy (MoE, 2009); and the Western Bay of Plenty regional strategy which identifies transport and logistics as a key area of focus (Bay of Connections, 2008, Page 10). Consequently, the concept presents as a world-class centre of excellence that 'sits between' the current education providers to broker a unique blend of (assured) highest quality...
education having characteristics of strong industry collaboration, independent advice, decision support and research for the horticulture, forestry and dairy supply chains among many others.

The following section provides a conceptual overview of the proposed centre of excellence, which is followed by a brief methodology section. The thematic analysis of the interview data is presented in section four. Discussion of the major insights is brought together before final conclusions are drawn.

A CENTRE OF EXCELLENCE

At the heart of the concept is an exciting and innovative education facility designed both to attract the brightest young students and to deliver transport and logistics qualifications that exceed internationally recognised standards. Programmes are delivered by experts working closely with industry to ensure that students of the highest calibre receive needed hands-on experiences, and are actively sought by industry even before they graduate. In order to become the leader in applied transport and logistics research within the Asia Pacific region collaboration with leading international research teams will be focused on investigating and transferring best practise to points of real industry need. Equally important, by engaging industry partners with expert capability and specialist researchers, importers and exporters will benefit from access to industry-relevant world-class research and problem-solving expertise that directly adds value to the NZ national and local economies. Figure 1 indicates how this synthesis of industry, education and research activity facilitated by the Centre, will yield significant synergies.
TABLE 1
VALUES OF THE CENTRE OF EXCELLENCE

<table>
<thead>
<tr>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellence</td>
<td>This Centre will be recognised as one that routinely exceeds internationally accepted standards of education, training, and applied research. Highest quality and customer service are non-negotiable.</td>
</tr>
<tr>
<td>Competition</td>
<td>This Centre recognises that it needs to compete on the international stage for the best students, faculty, and support staff.</td>
</tr>
<tr>
<td>Collaboration</td>
<td>This Centre will be the national model for effective collaboration between industry, universities, polytechnics, and ITOs for the benefit of graduates, export industries and other key regional stakeholders. Selected collaborative partnerships will enable the Centre to offer a wide suite of education, training and research options and pathways. A strong team culture of collaboration and mutual support will be fostered.</td>
</tr>
<tr>
<td>Scholarship</td>
<td>This Centre will engage in education, training and applied research activity that directly contributes to increasing the region’s knowledge base. It will be highly regarded as a contributor to international best practice; to which end student and staff exchanges between respected overseas partner institutions will be encouraged, and other types of international linkages will be pursued.</td>
</tr>
<tr>
<td>Innovation</td>
<td>This Centre will actively encourage development of its academic staff and industry stakeholders via a focus on creativity, innovation and support. The Centre will host national and international academic and practitioner conferences and forums. In turn it will be actively supported by its industry partners, who will maintain a strong, continuing onsite presence.</td>
</tr>
<tr>
<td>Inspiration</td>
<td>This Centre will engage with respected researchers around the world for the purposes of inspiring creativity, idea exchange, and knowledge sharing.</td>
</tr>
<tr>
<td>Transformation</td>
<td>This Centre will be a driver of change within the industries it serves, through its strong research programme and the calibre of its high quality graduates. It will conduct education, training and research activities that directly contribute to the industrial knowledge base and raise the standard of professionalism - thereby improving productivity, safety and sustainability. The Centre will present export industries as a highly attractive career choice.</td>
</tr>
</tbody>
</table>

In summary, the Centre is designed to be a world class education/industry collaboration and applied research facility based in the Bay of Plenty. It will predominantly exist to serve the Bay of Plenty region and wider New Zealand society; and the other countries of the world by providing an environment of creative enquiry within which critical thinking, human values, technical competence and practical and social skills, business acumen and a capability for lifelong learning are cultivated, respected, and sustained. The Centre will insist on the highest world-class standards of excellence in all that it does and will also strive to actively complement other institutions’ offerings.

RESEARCH METHODOLOGY

The proposed centre of excellence was drawn up as a concept document, the chief aspects of which were subsequently converted into a questionnaire which was used as a reference for face-to-face interviews. Figure 2 provides an overview of the research process. Administration of the proposed method was piloted with two industrialists and minor amendments made to the process to ensure that maximum insights would be obtained. Feedback on the concept involved a wide range of stakeholders, including: regional policy/decision-makers and senior managers of companies that handle the largest import/export volumes for the Bay of Plenty region.
FINDINGS

Interview notes were taken and combined with direct annotations made by the interviewees on the (previously circulated) questionnaires. Thematic analysis was then used to allow for the richness of data and for quantitative analysis of the responses. Table 2 highlights the key feedback data.

TABLE 2
FEEDBACK ON THE CONCEPT

<table>
<thead>
<tr>
<th>Reported Concept Positives</th>
<th>Interviewee Reference:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets a (high) standard from the outset</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandbox learning elements having applied, pragmatic problem-solving</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One stop integrated education provider</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breadth of qualifications on offer; training - doctorate ‘staircase’</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block release aspect of industry training</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International connectedness</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-pollination/facilitation of the major exporters in the region</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance structure and the Centre’s relative independence</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impressive building needed if to be used by industry</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral company spaces</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed location adjacent to the Port of Tauranga</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsive collaboration/facilitation aspects with industry/academe</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality assurance of others’ offerings</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also up-skills the Executive</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reported Concept Negatives</th>
<th>Interviewee Reference:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favours more of a pay-as-you-go arrangement after a low entry fee since hard for my company to find large up-front fees</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>We may not cope with this number of students placed in our Co.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Safety and security issues with students on site</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Possibility of commercial-in-confidence sensitivities</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>An aquarium would be more appropriate if the Centre was focusing on marine science... hard to find funding in the Tauranga market</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reported Concept Interesting Points</th>
<th>Interviewee Reference:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry think tanks; objective, independent, world-class</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Ability to offer/broker/coordinate papers that are being taught by the best providers from NZ and elsewhere</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Increased ability to become knowledgeable of best practises and issues</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Tourism/regional industry showcase; increased public awareness</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Designed to be inexpensive ($S and staff/time) yet is scalable</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
In essence, there appeared to be very strong consensus around four key elements of the concept:

**Relevance and Independence**

Every interviewee agreed that the Centre needs to be strongly focused on bringing the required expertise and vocational skills to bear directly at the points of real industry need. Several also highlighted the need for students to gain industry experience via intensive onsite learning and block-release programmes. Evidently, educational approach and content need to be closely linked to current (and projected) industry requirements.

"Customer focus is critical ... we are not interested in yet more costly (generic) courses."

Strong agreement was also expressed for a governance structure that would enable the Centre to flexibly align its activities with industrial, regional and educational imperatives. In particular, the need to be independent of the tertiary education providers was affirmed by several interviewees, to maximise responsiveness, impartially, and quality of offerings.

"Its proposed independence is fundamental to its success."

In short, industry stakeholders favour a facility that is (somehow) owned by the region and is independent of undue education provider influences. The prospect of becoming more knowledgeable about current issues and best practises, and being able to contribute to industry think tanks and forums was also welcomed.

**Qualifications**

The intention within the concept to offer well-defined career pathways and stair-cased qualifications from NZQA training all the way through to diplomas, masters and beyond, was well received by the interviewees. Although varying according to individual needs, subjects of interest all fell within the domains of transport, logistics management, and international trade and supply chain management. Regarding quality of the offerings, a large NZ exporter highlighted a desire for national coverage to be achieved by identifying and combining the best available course components into exemplar New Zealand qualifications - an approach that would also reduce capital requirements.

"The Centre could offer papers that are being taught by the best providers in NZ and overseas, and then it would only need to plug the gaps in these excellent offerings."

In essence, industry stakeholders favour creation of a responsive one stop ‘education integrator’. However, the small sample size provided no clear direction on the precise qualifications the Centre should offer.

**Transfer of Best Practice**

Interviewees welcomed the idea of ‘neutral’ shared learning spaces being made available to industry to aid benchmarking activities, for example. There was similar interest in the establishment of shared places of learning and of having expertise on hand to solve industry problems and communicate innovative new practices between and across industries. Although some concern was raised about the number of block release students requiring work experience, interviewees commented favourably on the proposed pragmatic problem-solving approaches and international connectedness for cross-pollination opportunities between the major import/export organisations. Overall, a very generous and collaborative mindset was evident and several interviewees offered their time and expertise to enable knowledge transfer and shared learning. Almost all agreed, in principle, to sponsor the placement of postgraduate students into their own organisations.

**Proposed Location**

Support for the Centre to be located close to the Port of Tauranga was almost unanimous due to the port's significance to New Zealand’s export economy, proximity to primary importers and exporters and its position within the logistical ‘golden triangle’ of Auckland, Hamilton and Tauranga. The Port of Tauranga is also the central node of the region's major supply chains. In particular, interviewees were very enthusiastic about the 'sandbox' learning elements described within the concept, since a wharf-side location integrated directly into the local logistical network would be ideal for creating a relatively compact ‘living learning laboratory’ and having collaborative spaces where business and academe routinely interact.
DISCUSSION

If overseas experience is anything to go by, such a world-class facility would undoubtedly contribute to the national and regional economies and knowledge base and would attract new businesses, bright young students, and a skilled workforce. It was therefore disappointing to also note comments such as, 'sustainability of demand for Centre products/services could be an issue', and, 'some of us have been here before... to get them to engage, stakeholders need to have some skin in the game'. Although several interviewees agreed that only industry can drive such a unique (to New Zealand) initiative, so as to bypass academic politics and get what business actually needs, there was a general unwillingness to engage further to help implement such a concept. In contrast, most interviewees were keen to become an 'Associate' once the Centre was up and running.

In summary, the empirical research revealed almost unanimous support for an independent, responsive, one-stop education facility that has national reach and which sets national standards of excellence related to international trade, transport and supply chain/logistics. Every stakeholder agreed that the concept was a compelling one and that it should proceed essentially unchanged from the format being proposed.

"This is an awesome concept - definitely needed. An enthralling read!"

CONCLUSION

There is clear agreement for a world-class and industry aligned education facility that is positioned as an integral part of New Zealand’s industrial productivity base. There is also consensus that this facility should be governed independently of the tertiary education providers to be able to responsively align with changing industry requirements. Consensus was also evident around the potential to address specific industrial needs and the desirability of best practice transfer through action research.

Given such enthusiasm and almost daily calls to improve industry productivity and reverse the 'brain-drain', the real question appears to be: Is there anyone with sufficient will and influence to champion an exciting centre of excellence that will attract the brightest young people and provide them with the education, mindset and industry skills that are required to ensure New Zealand's supply chains are genuinely world-class?

ACKNOWLEDGEMENTS

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REFERENCES


