Institutional Research in Australasia: Coming of Age or Coming Unstuck?

MARTIN HANLON AND MICHAEL ROTHERY

University of Technology, Sydney

ROB DALDY

Auckland University of Technology, New Zealand

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The scope of institutional research (IR) undertaken in Australasian universities is progressively expanding. A traditional focus on student life cycle elements such as enrolment, retention and satisfaction has been complemented for some years now by other areas of focus including research performance and community engagement. More recently, university rankings and national policy-driven topics such as academic standards have joined the agenda. In Australia, performance-based funding for student outcomes has been introduced, to be joined by deregulation of the student market from 2012. In New Zealand, the reform agenda is more progressed in some respects, with the introduction of student demand-driven funding in the 1990s.

Reasons for this broadening IR agenda in both countries include increased competitive pressures within the higher education sector, increased external scrutiny of institutions by regulators, funding bodies and rating agencies, and the development of more comprehensive performance indicator frameworks, both within institutions and by governments. At first pass, this menu of research topics and drivers might suggest that IR in Australasia has indeed 'come of age'. While this is clearly the case in terms of relevance, it is contestable whether this is also the case in terms of maturity and capacity: it is in this regard that practitioners risk 'coming unstuck' (a reference to the theme of the AAIR 2010 Forum). This article explores these issues drawing on the experiences of two Australasian universities, one from each side of the Tasman Sea.

The authors suggest that three types of factors—structural, process and cultural—influence the ability of institutions to maintain a sustainable and effective IR function and to undertake proactive analysis. They conclude that there is a range of tools now available to practitioners and leaders to allow their institutions to adjust to the new realities of the higher education sector. These tools point to a sustainable operating model for the future, focused on supporting strategic agenda-setting rather than conducting historical analysis.

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Correspondence to: Martin Hanlon, Director, Planning and Quality, University of Technology, Sydney, Level 25, Building 1, City Campus, Broadway NSW 2007 Australia. E-mail: Martin.Hanlon@uts.edu.au

Defining the Current Challenges

AAIR defines the purpose of IR as being 'to provide *objective*, *systematic* and *thorough* research that supports the institution's enrolment goals, planning, policy formation and decision-making' (emphasis added) (AAIR, 2010).

This purpose statement provides three qualifiers to distinguish quality research from substandard or superficial research: 'objective', 'systematic' and 'thorough'. It also scopes the topic areas to which this discipline can be applied. While the first area relates to a specific function ('student enrolment goals'), the other three ('planning, policy formation and decision-making') are generic and can be applied to all of an institution's endeavours, both strategic and operational. The conclusion is that IR should aspire to be both deep in rigour and broad in application.

Turning to the activities of IR, these include 'the *collection*, *analysis* and *interpretation* of information descriptive of an institution and its activities, including its students and staff, programs, management and operations' (emphasis added) (Zimmer, 1995). For practitioners, these definitional statements present a number of challenges to the delivery of IR that can effectively achieve its ultimate purpose, that of informing decision-making. Matulick (2007) suggests that decision-making in this context is focused on maximising institutional performance, as monitored by tools such as key performance indicators (KPIs), and maximising funding of the institution through tools such as student load forecasting models and databases to capture research output and impact measures.

The authors suggest that to be effective in the modern era, practitioners need to:

- have the capability *and* the capacity to undertake rigorous research, as implied by 'systematic' and 'thorough'
- be knowledgeable of their institution's planning and policy agenda, or at least strategic elements of it, as it affects both students and staff, and ideally other key stakeholders such as employers
- have access to information necessary to allow the initial research step of collection to occur and the subsequent value adding steps of analysis and interpretation
- understand and have access to the decision-making processes of the institution.

In the context of more rapid cycle times for the generic 'Plan, Do, Check, Act' quality management sequence, a fifth challenge needs to be added to the list: the ability to regularly meet challenges 1–4 above in a timely manner. This additional element can establish a tension between rigour and timeliness, highlighting the risk of 'overanalysis' at the expense of 'decision useful' inputs.

The challenges described above would be seen by most institutional researchers as formidable in their own right in the context of a relatively static research agenda. Such an agenda could be characterised by stability in the competitive landscape, government policy settings, funding streams and institutional leadership and direction. In such a context research demands might be largely cyclic and predictable. However, in recent years there would be few institutional researchers who would report that all or even any of these characteristics were applicable to their institutions. Arguably the most significant contributor to a dynamic research agenda is government policy.

Policy Contexts in Australia and New Zealand

As noted above, the last decade has seen a steady expansion in the IR agenda, particularly for larger institutions with multidimensional missions. The growing complexity of this agenda is being driven by continuously evolving national policy in Australia and New Zealand. A brief comparison of policy settings may help to situate the challenges facing Australasian institutional researchers.

Higher education policy in Australia in the 2000s saw the Commonwealth introduce and evolve performance-based funding schemes for research and research training (e.g. block funds for general research and research training infrastructure) and coursework programs (e.g. Learning and Teaching Performance Fund). These schemes further solidified the broader move towards a performance-driven funding model for the Australian higher education sector (Wells, 1996).

Australia's federal Labor government came to power in 2007 committed to delivering an 'education revolution'. Following the Bradley and Cutler reviews completed in 2008, the government translated this vision into specific goals, such as participation targets for all 25–34-year-olds. It coupled these goals with a plan to deregulate undergraduate government-supported student load, leading to funding on the basis of student demand from 2012. The government also commissioned the 'Excellence in Research for Australia' (ERA) process, with a strong emphasis on the quality of research undertaken across the sector. The introduction of mission-based compacts in 2011 to foster greater diversity in the sector and the scheduled launch of the *My University* website in the near future will consolidate the accountability dimensions to this reform agenda. Also significant will be the progressive establishment of the Tertiary Education Quality and Standards Agency (TEQSA) from mid-2011, a new independent national regulatory and quality agency for higher education, and its use of a proportionate risk-based approach to regulation linked to national minimum standards. Finally, since the August 2010 federal election with independent members of parliament holding the balance of power in the House of Representatives, 'pathways to university', particularly in regional areas, has gained new prominence.

New Zealand's reform agenda has varied from Australia's, with a deregulated student demand-driven funding framework introduced in the 1990s. Since 2003, reforms have been guided by the Tertiary Education Commission (TEC), which had an initial focus on addressing spiralling costs and the proliferation of duplicated or poor quality lower-level qualifications (largely in the nonuniversity tertiary sector) that resulted from the deregulated student load-based funding system of the 1990s. TEC's more recent focus has shifted toward making the tertiary sector more responsive in its contribution to the government's overarching social and economic goals, as expressed in the government's Tertiary Education Strategy (TES).

The TEC has progressively guided a shift toward the key priorities outlined in the New Zealand Government's TES, placing increased emphasis on performance incentives and accountability. Principal mechanisms for achieving these policy aims have been the performance-based research funding (PBRF), introduced in 2003, and investment planning processes (three-year funding contracts), both of which bear similarities to mechanisms in current Australian tertiary education policy (mission-based compacts and ERA). However, over the next three years the shifts required of institutions in New Zealand's tertiary sector—and agreed through the Investment Plan process—will occur within a capped funding environment, from which the Australian sector is set to emerge.

This brief comparison of policy settings indicates that areas of focus for institutional researchers, both in Australia and New Zealand, will continue to evolve, and that there are opportunities for cross-jurisdictional learning.

Future Challenges and Policy Contexts

A question facing all IR practitioners and their leaders seeking to bed down a reasonably future-proof approach to IR is what will be the policy settings and broader operating context over the medium- to long- term future? One insight into the potential policy settings of future Australasian governments is provided by Galwey and Ogilvie (2010). Table 1 presents a desired future state in a New Zealand context (although adaptable to the Australian situation), described as a state that would enable institutions to readily adapt to changes in their environment and strengthen their likelihood of business sustainability. The authors of the article note that the paradigm shift described will not eventuate if it proves to be unpalatable to public policymakers or those charged with policy delivery. Indeed, many of the current policy settings in either Australasian jurisdiction do not signal a clear move towards this future scenario, although some elements may be emerging (e.g. self-governance in Australia through the mission-based compacts process).

Table 1

Emergent Change in the New Zealand Tertiary Education Sector

Aspect	*Current*	*Future*
Emphasis	Risk – minimising the Crown's residual liabilities	Optimisation – maximising the Crown's strategic outcomes
Time frame	Short/medium term	Medium/long term (especially given capital asset management considerations)
Success	Viability	Sustainable value creation
Managerial emphasis on TEIs	Control	Self governance
Performance management	KPIs, support control	Balanced Scorecards, support organisational learning and continuous planning
Risk propensity	Low	Higher, with stronger emphasis on identification and mitigation
Culture	Low trust, rules based	High trust, self governance
Engagement	At some distance	Partnering
Analytical focus	Historically orientated	Strategic and agenda setting
Resource allocation	Budgets central to process, fixed resourcing	Rolling forecast central to process, dynamic resourcing
Adaptability (of ITPs)	Slow	Shifts quickly to market and policy changes
Sector behaviours	Compliant, observing the rules	Committed and aligned to outcomes
Benchmarking	Target setting	Catalyst for continuous improvement/organisational learning
Strategy	Is a destination	Is a direction

Note: TEIs = Tertiary Education Institutions; ITPs = Institutes of Technology and Polytechnics

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Institutional Responses: Two Australasian Case Studies

The University of Technology, Sydney (UTS) and Auckland University of Technology (AUT) are two city-based technology universities of similar profile and scale. These institutions present useful case studies of universities with comparable goals and challenges but operating in different jurisdictions and at different points in the development of integrated business intelligence (BI) solutions.

Both universities have globally focused purpose statements: UTS 'To advance knowledge and learning to progress the professions, industry and communities of the world' (UTS Strategic Plan 2009–2018), and AUT 'To foster excellence, equity and ethics in learning, teaching, research and scholarship and in so doing serve our regional, national and international communities' (AUT Strategic Plan 2007–2011). Both have a technological heritage and an applied focus, with distinctive contributions in disciplines such as engineering, information technology, business and creative industries. Each institution has articulated critical success factors in the areas of learning outcomes and professional practice, graduate employability, research profile, campus renewal and organisational effectiveness. UTS is the older and slightly larger of the two universities with 30,000 students enrolled, while AUT has 26,000 enrolments. AUT has been the fastest growing university in New Zealand in terms of student numbers and evolution of student profile from 45% pre/subdegree and 55% undergraduate/postgraduate students in 2000 to about 85% undergraduate/postgraduate students in 2010.

UTS and AUT both have dedicated IR units: UTS has a Strategic Intelligence team within the Planning and Quality Unit, part of the Senior Deputy Vice-Chancellor's portfolio, and AUT has an Institutional Research Unit within the Strategy and Development arm of the Vice-Chancellor's Department. The UTS SI team is currently resourced with six permanent full-time equivalent staff for 'business as usual' activities while AUT has four.

Both teams are principally responsible for the annual student enrolment forecasting process, enrolment scenario analytics and load planning support. They also deliver routine and ad hoc research and analysis to support statutory reporting, performance monitoring, strategic developments and decision-making processes. Added to these responsibilities is an annual program of university-wide student feedback and experience surveys. UTS's survey program incorporates a regular survey of reputation with industry leaders, and AUT's incorporates ad hoc staff feedback surveys.

Another parallel is that both teams support their institution's existing BI capability and development. The Strategic Intelligence team at UTS maintains a BI environment incorporating around 50 data cubes, a data warehouse and multiple dashboards supporting the university's KPI framework spanning five performance domains. During 2008–2010 the team was supplemented with a further three full-time employees to deliver an integrated BI solution incorporating a data warehouse. Since 2010, AUT's Institutional Research Unit has led a BI development program with a similar goal, with one additional employee assigned for this purpose.

The IR model practiced in both institutions is similar: the central team works within a broader network. These networks include 'IR practitioners' in various units with particular areas of focus, such as strategic planning (e.g. KPI reporting and target setting), student services (e.g. student surveys, attrition analysis), learning and teaching support (e.g. student

feedback on teaching), the research office (e.g. research performance analysis) and human resources (e.g. staff surveys, workforce planning).

In both institutions the volume and distributed scope of IR reflects both the comparatively decentralised structures as well as the broad range of research, monitoring and analytics that are now recognised as being essential to the effective operation of a university and the maintenance of quality. It is therefore encouraging that there is growing cooperation between these various departments, on an informal or 'as required' basis, reflecting the increasingly complex and multidisciplinary nature of some of the required analytical processes and outputs.

University leaders at both UTS and AUT have recognised that the capacity of their IR teams to undertake a comprehensive and routine program of objective, systematic and thorough research and analytics is greatly enhanced if a purpose-built BI platform is developed. These platforms are typically designed to operate across key university data sources (student management, research management, human resources, finance, space planning) and are intended to provide access to a comprehensive, integrated and standardised source of data, with capability to support forecasting, predictive analytics and modelling.

As noted earlier, a BI platform of this nature has recently been developed at UTS with standardised datasets supporting a wide range of university KPIs now stored in a data warehouse. AUT has recently allocated internal funding to support a pilot BI solution (proof of concept). Ultimately, both institutions foresee their BI platforms supporting exploratory analytics aimed at identifying opportunities to enhance student outcomes and operating effectiveness and efficiency.

In the experience of both institutions, compliance requirements associated with reporting of student load, supporting performance-funding arrangements, preparing capital funding cases and responding to targeted performance reviews and quality audits consume a large proportion of an IR team's capacity. Proactive internally driven analyses, such as those directly linked to an institution's strategic plan, are more readily undertaken in the periods between compliance obligations. Mature BI platforms have the capacity to support both categories of analysis, with the goal of creating more time for the latter.

Despite the reasonably coordinated approach to IR in place at both UTS and AUT, and the existence of senior support for further strengthening of analytical capabilities, practitioners at both institutions would claim that they are struggling to maintain delivery of high-quality services across the ever-broadening research agenda noted earlier. In both institutions, university leaders have expressed a desire for deeper analysis and interpretation across a broader range of topics, and for timely reporting.

Institutional Responses: General Factors

The comparisons explored here suggest that despite the different policy settings and historical development in Australian and New Zealand higher education, the institutional response—as expressed through the evolving function and operation of the case study IR units—has been similar.

Looking forward, the combined impacts of an expanding institutional research agenda, increased attention to the outputs of IR teams, the creeping influence of BI systems in strategic decision-making and the continued uncertainty of government funding regimes is

likely to result in more considered decisions by institutions about the design and resourcing of their IR function. Institutions that can evaluate a range of alternatives for the design of their IR unit and the analytical tools appropriate to their own emerging policy-setting and then evaluate the efficacy of their decisions will sustain an advantage in a globally competitive higher education market.

The authors suggest that three types of factors—structural, process and cultural—influence the extent to which an IR unit will be sustainable into the future and capable of undertaking value-adding analysis.

Structural factors, both internal and external, include the scope of the institutional mission (e.g. teaching and learning only vs. comprehensive, public vs. private), scope and complexity of the student profile and fee regimes (e.g. mix of undergraduates and postgraduates, government-supported and full fee-paying, domestic and international), competitive context (e.g. geographical proximity of other providers) and demographic profile of the local catchment for students and staff. Additional internal structural factors include location of the IR team within the organisation and. of course, the team's size and capacity.

Process factors include the strategic planning framework (e.g. specificity of strategic goals) and transparency of decision points within various processes (affecting the opportunities for researchers to add value at the appropriate time in the appropriate way). Other process factors include maturity of both KPI frameworks (in terms of alignment of metrics to business processes and maturity of target setting) and business intelligence systems (in terms of data quality and timeliness, data management and control, analytical tools and IT capability).

Cultural factors include the nature of the research questions being posed by management (e.g. 'Are we sure the results for this indicator are reliable?' vs. 'Why aren't we performing better than institution X on this indicator?') and the empowerment of IR staff to research and present 'frank and fearless' objective analysis that may be critical of internal strategies or previous resource allocation decisions. In the words of Low (2002), leaders need 'to allow the facts (and the institution's values) to interfere with some of the "good theories"'.

These factors may provide reference points for any IR unit conducting a self-assessment of its operating environment as a precursor to developing an operating model for the future.

Towards New Operating Models: Potential Tools for the Future

For some time the IR community has acknowledged that practices need to evolve in order to adjust to the ever-changing realities of the higher education sector. A decade ago Palermo (2000) argued that researchers needed to become 'information brokers', creating links between people, policy, process and data, analysing the system as a whole and encouraging leaders to challenge their own assumptions. Low (2002) foreshadowed that IR practitioners would be needed for all aspects of planning, not just planning for changes in government-funded student load, and involve 'teams of researchers from a number of areas within the university'. Kleeman and Lake (2005) reported on a case study reflecting these foreshadowed evolutions, where lengthy supply-driven reports were replaced by 'just in time' purpose-designed data reports feeding into agreed processes, such as reviews of courses and schools. Most recently Knight (2010) found that personal characteristics of effective institutional researchers in the current US context (as assessed by researchers themselves)

include engagement with various university processes, strong relationships with decision-makers, responsiveness and foundational elements such as an ability to convey information effectively, concern about data integrity, and technical and analytical skills.

Galwey and Ogilvie (2010) provide a valuable contribution from the perspective of policymakers in New Zealand's tertiary education sphere (readily adaptable to IR practitioners): an unrelenting approach to systems disciplines, including systems thinking, systems design and systems implementation, with an eye to anticipating unintended consequences of poorly designed interventions. These characteristics provide some pointers towards an operating model for IR practitioners in the years ahead.

Returning to the five attributes of an effective practitioner suggested earlier (capability and capacity to undertake rigorous and time-consuming research; knowledge of the institution's planning and policy agenda; access to information; access to the decision-making processes; *and* ability to regularly meet these four challenges in a timely manner), a fundamental question that arises is what tools are available to support practitioners in developing these attributes?

Based on a limited literature review and the case studies presented above, the authors have identified a number of specific tools that IR teams and university leaders can adopt and combine to develop the capabilities necessary for the future. Each institution will need to determine which mix of tools is most likely to optimise their research capacity, taking into account their emerging policy context and other contextual factors. A key consideration will be the tensions that are likely to arise between efforts to consolidate the central IR team's capability and efforts to build IR capability in other areas. This latter scenario could potentially dilute the capacity of the central team through increased demand for user support.

Seven IR tools are described below, with 'tools' interpreted to include approaches relevant to both practitioners and institutional leaders. The authors suggest that these and other enhancements of this nature will allow institutions to more fully harness the capability offered by their BI solutions, and move beyond what could be considered to be the 'demonstration phase'. A 2008 survey of IR practitioners in the Australian higher education sector identified that while investment in BI solutions had increased, progress to full deployment stage was mixed (Australian University Quality Agency, [AUQA], 2010).

Virtual IR Teams/BICC

The ever-expanding scope of IR and relentless demand for timely responses to complex research questions require institutions to fully harness the analytical capacity of their workforce to address research questions. Depending on the size and scope of the institution, this workforce may include the central institutional researcher or research team, usually located in the planning, statistics and/or quality unit. Data analysts in various executive support roles, specialist central support areas (e.g. learning and teaching, equity, postgraduate research students, research, human resources) and possibly large academic units, in-house statisticians and external consultants may also be included. Cooperative arrangements between staff across this spectrum can be valuable mechanisms for spreading the research load. Many institutions already have such a devolved model in place. These arrangements tend to be informal and based on personal relationships rather than defined roles, potentially leading to suboptimal outcomes and duplication of effort. Formalising such arrangements in terms of clarifying common goals and individual responsibilities, if pursued in a cooperative spirit, should lead to a strengthened capacity to respond to, and anticipate, research questions and a more sustainable IR capacity. To be successful, such a team or Business Intelligence

Competency Centre (BICC) needs to be governed by commonly shared protocols for managing information covering topics such as data definitions and rules for changing datasets.

Lead Indicators and Business Analytics

Traditional external reporting requirements and internal performance measures used in the higher education sector tend to focus on output or outcome ('lag') indicators. They give a sense of how the institution performed in the recent past (or in the case of many research indicators, the more distant past), rather than input or process ('lead') measures indicating how the institution is likely to perform in the future. According to Davenport and Harris (2007), answering questions such as 'what happened?', 'where exactly is the problem?' and even 'what actions are needed?' is the domain of access and reporting. In contrast, analytics incorporating the use of forecasting, predictive modelling and optimisation, answers proactive questions such as 'what if these trends continue?' 'what will happen next?' and 'what's the best that can happen?' Figure 1 presents one representation of the relationship between the range of reporting and analytical tools, and the questions they can answer.

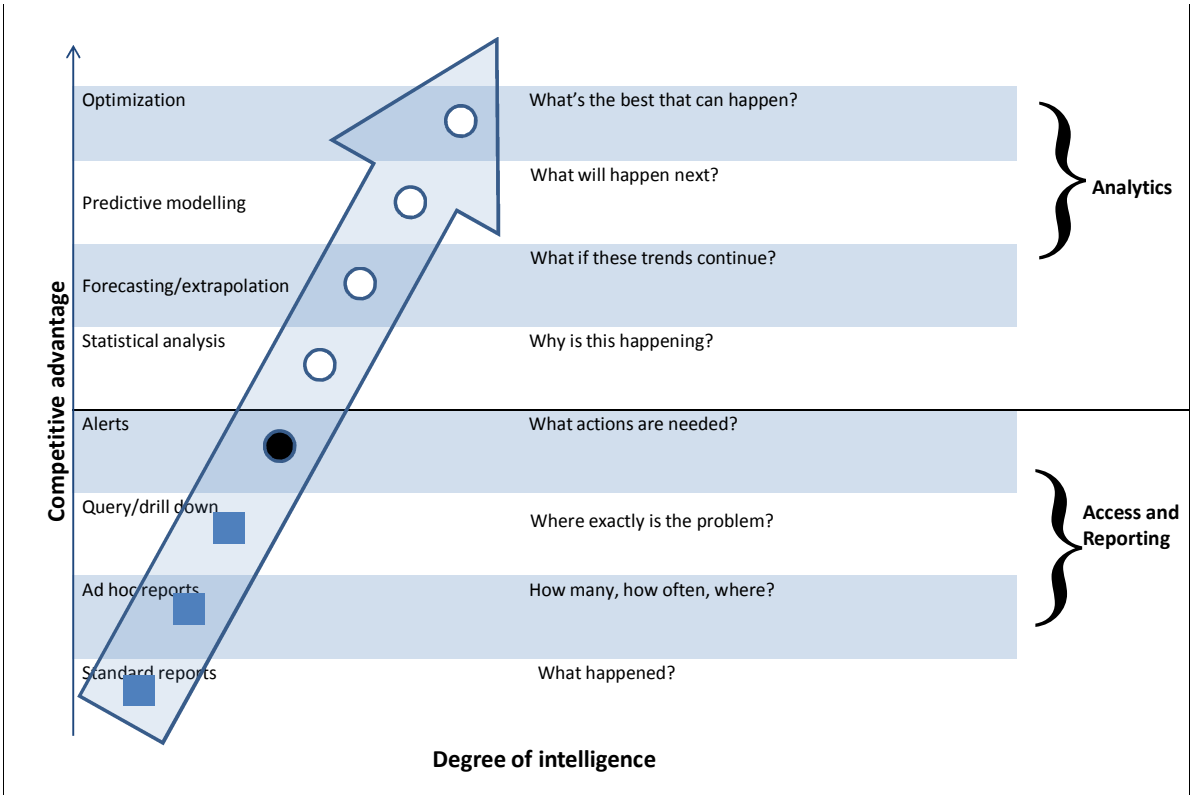

Figure 1

Business intelligence and analytics capability spectrum.

From: Davenport, T.H., & Harris, J.G. (2007). *Competing on analytics: The new science of winning* (p. 8). Boston: Harvard Business Publishers. Copyright (2007) by Harvard Business Publishers. Reprinted with permission.

Both Figure 1 and Table 1 signal that universities which chose to invest in their analytical capabilities through forward-looking performance measurement frameworks, advanced BI systems, and staff with skills in analytics, will have more opportunity to influence future institutional results.

Enterprise Process Architectures and Fully Leveraged BI Solutions

Identification of lead indicators is problematic if the processes they measure are ill-defined. Despite the prevalence of specific 'process improvement' initiatives throughout Australasian universities, there is little evidence of universities undertaking a holistic management of their processes or 'value chains' at the enterprise (university) level. Enterprise mapping to create an 'architecture' representing the value delivered to customers through 'core' business processes is common practice in other sectors as a platform for process governance, measurement and improvement. An international search commissioned by UTS unearthed only one such documented architecture in the higher education sector, interestingly from another Australasian university (Hanover, 2009). As with any management tool developed outside of the higher education sector, the concepts and language need to be adapted to reflect the centrality of students and academic staff to the mission of a university, as distinct from classic 'customers', and the oft-quoted difference between operating in a business-like manner and as a commercial business. These limitations aside, UTS is finding the concept of an enterprise process architecture to be a useful analytical tool. One application under consideration is using the architecture to guide determination of lead indicators for core and support processes. The rationale is that by having a better understanding of the process requirements that lead to improved performance outcomes, there is a stronger likelihood of repeating those results.

Student Segmentation and Identifiers

A critical specialisation of IR in universities will always be the tracking of student groups of interest as they progress through the student lifecycle or 'value chain' from pre-enrolment to postgraduation. Such tracking allows institutions to better anticipate the needs of particular cohorts. The advent of data mining tools with artificial intelligence capabilities presents opportunities for institutions to better harness the intelligence hidden in their student data systems by evolving from traditional demographic cohorts to customised multidimensional segments. Commercial data analysis consultants now claim to offer a high level of capability in this area. Also of value would be the ability to track individual students as they move through an institution and indeed throughout a national education and training system. In Australia, the possible introduction of national unique student identifiers for the school and vocational education and training sectors presents great potential for application throughout the entire education system, as long as necessary data and evaluation capabilities are developed within institutions (Harman, 2010) and privacy considerations addressed.

Trans-Institutional Studies

Given the commonality of research questions across institutions, even across jurisdictions, there will always be a place for supra-institutional research. In fact, there is a growing trend to compare institutions' performance domestically and overseas through common student surveys, for example (Moodie, 2009). Yorke (2010) concludes that trans-institutional studies can be effective at various points along the intensity spectrum from heavily resourced studies (macro-level) to informal online inquiries of colleagues with a common interest (micro-level). Studies in between these extremes (meso-level) are attractive in that they can provide rigour and be undertaken at relatively small cost. The overriding consideration of all such studies is fitness for purpose: sometimes a short, sharp, online

inquiry will be sufficient to inform a decision or comply with a deadline. In cases where more rigorous meso-level research is required, the challenge for the future is to conceive, commission and deliver studies in a more timely manner aligned to the collective and individual decision points of participants. In these circumstances, prompt agreement on a lead researcher, roles of any third parties, funding arrangements and protocols around data sharing will be prerequisites to an effective study. A number of third parties now exist with the capability to undertake quick turnaround research studies and more formal benchmarking projects.

Enabling Decision-Makers with Self-Service Management Information

All the tools presented above are dependent on institutional researchers initiating information collection, analysis and/or dissemination or development of the tool itself. Focusing on these dimensions alone presents a risk that the IR team becomes a bottleneck to the flow of relevant and timely information to decision-makers. Part of the solution to a sustainable IR function has to be the provision of decision-makers and their staff with self-service access to online information. The aim of such a service should be to allow decision-makers to answer their day-to-day questions without having to contact the IR team. This will allow the team to focus on answering the more complex research questions. A prerequisite for self-service to be well received by users is trust in the data: any sense of 'multiple sources of the truth' or that a complex set of filters need to be mastered before meaningful reports can be generated will undermine the acceptance of self-service. Matulick and Murdoch (2004) provide advice on the development of a data quality framework applicable in this context. Critical concepts include data governance, ownership, classification, validation (at both input and output) and visibility.

While elements of self-service have been provided by several Australasian institutions for some time, the attributes of a successful deployment are now more fully understood. Functionality that continues to become easier to use, is intuitive and web-based (e.g. dashboards with drill down capability) will lead to better engagement of decision-makers with IR products and services. The end goal of any self-service strategy should be to generate 'more effective data consumers who learn to ask more sophisticated questions and solve more complex problems' (SAS, 2010).

Strategic Conversations

As alluded to throughout this article, for IR to be effective it needs to go further than researchers simply updating their work practices and broadening their toolkits. Leaders need to play their part by making sure their institution's decision-making processes are transparent, accessible to institutional researchers and, where possible, stable. Researchers are better able to focus their research efforts into areas of highest importance to the institution if they are exposed to how decisions are made and how IR is used (or not used) in the process.

Many decision-making processes, both academic and administrative, would benefit from dialogue between decision-makers and staff with relevant institutional research capability. Common topics in these conversations will include the institution's performance and strategic direction, internal comparisons between faculties and units, and external comparisons with competitors and benchmarking partners. All parties should be encouraged to bring 'evidence' to the table, and to be objective and reflective. Simple facilitation tools such as 'five whys' can assist participants to clarify the root cause of a particular outcome or, if unclear, the fundamental research question to be investigated. Conversations can be

extended to involve other institutions, either within or outside the sector, in the context of benchmarking for improvement.

Conclusion

The challenges facing IR practitioners in Australasia at the present time are considerable amidst an ever-expanding IR agenda, shortened cycle times and the constant of limited resources. However, there are a range of tools available to practitioners and leaders to reduce the risk of practitioners 'coming unstuck'. These tools point to what a sustainable operating model for the future might look like, focused on supporting strategic agenda-setting and systemic approaches, rather than conducting narrow historical analyses. IR units will need to make choices about which tools will optimise their research capacity, and practitioners will need to change their conceptualisation of IR and what personal skill sets they need. However, for IR to truly come of age university leaders will need to work with practitioners to develop and resource roadmaps for development of their institution's IR capability and capacity. They will also need to demonstrate that they are embracing evidence-based decision-making. Finally, at the national level, AAIR will have routine opportunities to promote these principles in Canberra and Wellington!

Postscript: A Thought on Quality Control

The two definitions of IR presented at the beginning of this article, if combined, provide the beginnings of a possible quality control checklist for IR (Table 2). This checklist could be applied to each discrete research task or be used more holistically.

Table 2

Potential Institutional Research Quality Control Checklist

		Institutional Research Attributes		
		Objective?	Systematic?	Thorough?
Institutional Research Steps	Was information collection . . .	☑	☑	☑
	Was information analysis . . .	☑	☑	☑
	Was information interpretation . . .	☑	☑	☑

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