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Steering by Engagement: Towards an Integrated Planning and Evaluation Framework in Higher Education Institutes

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Steering by engagement - Towards an integrated planning and evaluation framework in Higher Education Institutes

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Abstract

Higher Education Institutes (HEIs) worldwide are investing significant resources in strategic planning and self study programs to improve institutional performance. Both are expensive undertakings in terms of the time invested by participants and it is not unusual to see both programs underway in a HEI at the same time. The underlying knowledge produced about the challenges facing the Institution and the necessary responses can be broadly similar although their methodologies and presentation may differ. This paper reports on the comparative effectiveness of three strategic planning and three self study programs undertaken in one HEI over an 8 year timeframe under a number of criteria. It discusses the introduction of a nationally agreed Performance Management and Development Systems for academic staff in Ireland. Based on the findings from this study the paper presents a model for an integrated planning and evaluation framework and the rationale behind it is discussed. Conclusions are drawn and areas for further research are identified.

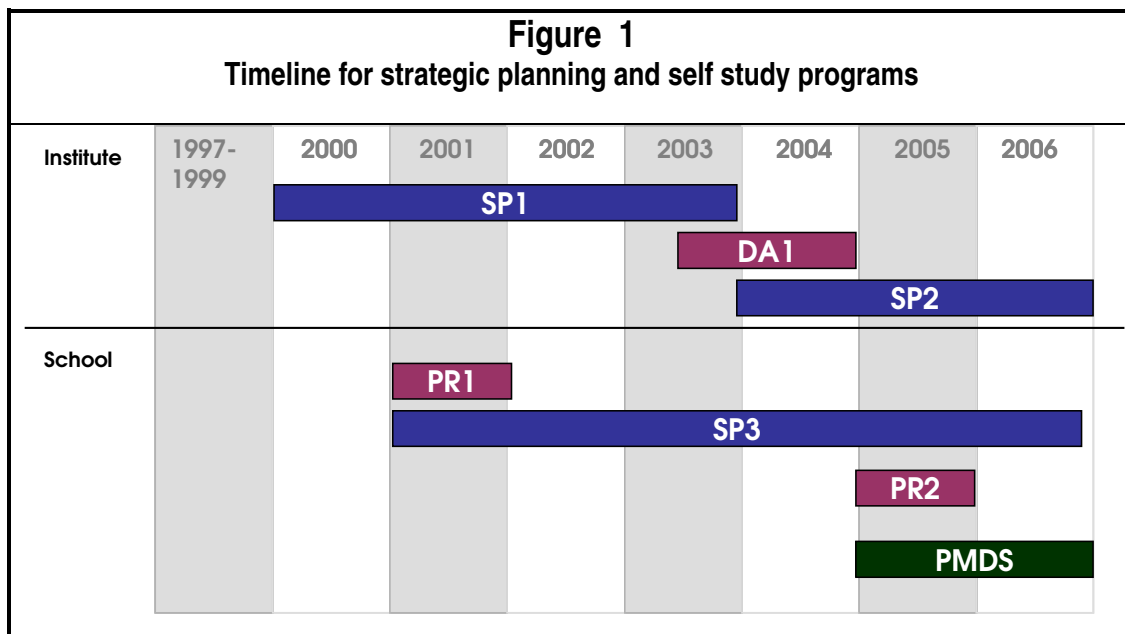
1 Context of the Study

Covering an eight year period from 1997-2006 a systematic program evaluation methodology was used (Rossi *et al.* 2003) to evaluate and compare the effectiveness of three strategic planning and three self study programs in the Institute of Technology Tralee (IT Tralee) in Ireland. IT Tralee is a university-level institution with courses in Business Studies, Engineering and Science & Computing, with progression paths from Higher Certificate to Masters/PhD qualifications. IT Tralee has approximately 3,500 students and 300 academic staff and is one of 13 Institutes of Technology (IOT) which can be loosely classified as being part of the '*non-university*' sector. Although an identical model to the IOTs does not exist elsewhere they exhibit some similarities with the Finnish AMKs, Dutch HBOs, French IUTs, German FHS and the Institutes of Technology in New Zealand.

IT Tralee developed its first institutional strategic plan in 2000. This is termed SP1 in the sections that follow and it was originally intended to run from 2000-2006. The following year a Programmatic Review self study program (PR1) was undertaken in the School of Science & Computing which was required to maintain the accreditation status of its courses. As part of PR1 a departmental strategic planning process was initiated within the School (called SP3 in the sections that follow). The Irish Qualifications Act in 1999 made provision for Institutes of Technology to obtain Delegated Authority from the Higher Education and Training Awards Council (HETAC) to make awards within the National Qualifications Framework of Ireland (Government of Ireland 1999). The goal of the Delegated Authority program (DA1) was essentially to achieve self-awarding status following an Institute-wide review of all activities. DA1 ran from 2003-2004 and the Institute achieved Delegated Authority in September 2004. One of the key recommendations arising from the DA1 self study program was that a new strategic plan was necessary as a result of the changing environment in which the Institute found itself and the second strategic planning program (SP2) was initiated in 2004. A second Programmatic Review (PR2) was undertaken in the School of Science and Computing in 2004/05 as part of the quinquennial cycle.

In total therefore there are three strategic planning programs in this study. SP1 and SP2 are Institute level strategic planning programs and SP3 is the extension of SP1 into the School of Science and Computing. There are also three self study programs. DA1 was undertaken at Institute level to obtain self-awarding status and PR1 and PR2 were undertaken at School level to maintain the accreditation status of courses of study. A number of external peer review panels have commended both the strategic planning and self study programs in the Institute indicating that they are likely to provide an information rich case study. This meets the criteria of an ‘intensity case’ – a case which is not unusual but from which much can be learned (Patton 2002).

The roll out of the Performance Management and Development System (PMDS) started in all IOTs during the 2005/2006 academic year. A pilot implementation was undertaken in four Institutes during 2004/05 in approximately 15 departments (both academic and support services). Figure 1 illustrates the year that each of the programs was initiated and highlights those undertaken at Institute versus School level. Under PMDS every staff member in the Institute agrees their personal performance objectives and targets with their manager on an annual basis through the creation of Personal Development Plans (PDPs) (PartnershipIT 2005). These plans are explicitly linked to the Team Development Plan (TDP) of the department to which the staff member belongs which is ultimately linked to the strategic plan of the Institute. Participation in the process is mandatory however it is important to note that it is not a performance appraisal system and at the level of the individual PMDS is detached from pay, promotion and disciplinary procedures. In essence the process has neither a ‘stick’ or a ‘carrot’ in that it cannot explicitly reward good performance or address poor performance.



The case for integration

At its simplest level strategic planning has a focus on future planning in which current activities are reviewed. Self study focuses on reviewing current activities from which future plans are outlined. The programs are rarely fully integrated within

a HEI and they may be serving different purposes. The strategic plan may be required by a funding agency and the self study program may be required by a quality assurance accreditation body for example. There is a strong case to be made for integrating the programs which includes streamlining the significant overlap between them and increasing cohesion. The overhead involved in taking staff away from their core duties to participate in strategic planning and self study is significant and the benefits should outweigh the costs. Lack of integration increases this overhead which can lead to duplication of effort and frustration for the participants. Separate programs can also lead to divergent trajectories. In an extreme example an institutional strategic planning program, undertaken using a top-down process model, might set a strategic direction for the Institution which might include strategic alliances with other Institutions, a revised portfolio of course offerings of most relevance to the marketplace and research centres which have the greatest potential for commercialisation and income generation. A School or Department self study, undertaken using a bottom-up model, may arrive at very different and equally legitimate conclusions on the same topics. The individual academic, busy directing their energies into their own research, may well be oblivious to both. The end result is that the Institution, the School/Department and the individual are heading in different directions. Although there is a strong case to be made for integrating strategic planning and self study programs there is very little literature which empirically tests the concept.

3 Research Methodology & Context

A reality-oriented, post-positivist philosophy was adopted for the overall study which means the results can be viewed in terms of probable causal effects and in which the reader has discretion to draw his/her own conclusions on the basis of the evidence presented. A mixed mode approach was used by mixing hypo-deductive reasoning with primarily qualitative methods of inquiry. The main data sources used were documents (Institute publications, proceedings of Governing Body, Academic Council, senior management team etc) and interviews with n=17 key informants. The informants included all of the senior management team of the Institute and approximately half of the wider management team. Triangulation was used wherever possible to minimise potential bias and substantiate results. The methodology draws from the evaluation literature base with particular reference to social programs undertaken in public sector and educational settings (Smith 1989; Patton 2002; Rossi *et al.* 2003). An initial hypothesis that *'the program was effective in leading to improvements in institutional performance'* was tested in each of the six programs. Rossi *et al.*'s methodology for systematic evaluation of social programs was used to evaluate the programs in terms of the underlying need they addressed, the appropriateness of their design, the degree to which they were implemented *'as-intended'* (Rossi 2003). The impact of the programs were assessed from two perspectives (i) a goals-based assessment of the degree to which the programs met their stated goals and objectives and (ii) a goals-free assessment which looked at other improvements accruing. Net outcomes were separated from gross outcomes of the programs i.e. to determine *'what would have happened without the programs?'*. The effectiveness of the programs was then compared by producing a ranked list under a number of criteria.

It is important from the outset to clarify the author's role in the programs as she was a member of the Institute's management team throughout the lifetime of the programs. As such every effort was made to eliminate potential bias by ensuring that both data sources and collection methods were triangulated. Where deemed necessary a reminder of the author's involvement with the programs will be included in the sections that follow to highlight any areas where potential bias may occur and to enable the reader to draw his/her own conclusions.

4 The effectiveness of the strategic planning and self study programs

The results of program evaluations for the strategic planning and self study programs are considered in this section. The strategic planning programs are considered together in Section 4.1 and self study in Section 4.2. Section 4.3 compares the effectiveness of the programs in leading to improvements in institutional performance.

4.1 The effectiveness of the strategic planning programs

The program impact assessment considers (i) the need for the program (ii) an assessment of the process undertaken and (iii) the impact of the program. An Institutional Review process required by the accreditation agency HETAC was the initial impetus for the strategic planning programs but the existing planning and quality assurance systems in the Institute were sub-optimal for long term strategic planning (Lillis 2006b). The strategic plans were developed using a rational strategic planning model as per Whittington's typology of strategy (Whittington 1993). Table 1 illustrates the main components of the process used in IT Tralee.

Ref	Generic Strategic Planning Model	IT Tralee Strategic Planning Process	Flowchart
SP.A	Mission and Goals	Mission & Goals	<pre> graph TD A[Generic strategic planning Process model] --> B[Mission and goals] B --> C[SWOT Analysis/ Strategic Choice] C --> D[develop objectives & strategies] D --> E[Implement objectives & strategies] </pre>
SP.B	SWOT Analysis	External Analysis (Opportunities & Threats) Internal Analysis (Strengths & Weaknesses) SWOT (Strategic Choice)	
SP.C	Developing Objectives and Strategies	Corporate Level Strategy	
SP.D	Implementing Objectives & Strategies	Functional Level Strategy; Strategy Implementation; Designing Organisation Structure & Control Systems; Matching Strategy, Structure & Controls; Managing Strategic Change	

All major components of a strategic planning process were implemented largely *as-intended* in the three programs and a degree of confidence can therefore be placed on the outcomes of the impact assessments (Lillis 2006b). The most problematic area was aligning organisational structures, budgets and resources to strategic priorities as part of the implementation phase. There were some issues also in relation to tracking progress on the plans.

The definition of effectiveness used in this study is that to be considered effective a program (i) must meet its stated goals and objectives and (ii) may lead to other (possibly unintended) improvements. A summary of the goals of the three strategic plans is given in Appendix A.1 and the basis for the impact assessment is outlined in Appendix A.2. Detailed methodological descriptions are available in (Lillis 2006b). Two variables have a significant impact on how the effectiveness of the programs are interpreted. The first is that each of the goals set in the strategic

plans have a number of associated objectives. The threshold set for “percent complete” is a key consideration *i.e.* How many of the objectives associated with a strategic goal have to be completed for the goal to be achieved? Secondly the interpretation can vary significantly depending on whether ‘ongoing’ work is included or excluded. Objectives were categorised as ‘ongoing’ if there was no evidence of additional work being undertaken over and above what was ordinarily taking place¹. Table 2 presents views of the impact assessments with ongoing work included/excluded and different threshold values ($\geq 33\%$, $\geq 50\%$ and $\geq 66\%$). The table presents the number of goals complete out of the total number of goals.

Threshold	SP1 (excl. ongoing)	SP1 (incl. ongoing)	SP2 (excl. ongoing)	SP2 (incl. ongoing)	SP3 (excl. ongoing)	SP3 (incl. ongoing)
$\geq 33\%$	9 of 13	12 of 13	4 of 8	7 of 8	26 of 31	29 of 31
$\geq 50\%$	9 of 13	11 of 13	3 of 8	6 of 8	22 of 31	27 of 31
$\geq 66\%$	5 of 13	5 of 13	0 of 8	3 of 8	15 of 31	21 of 31

The purpose of presenting the various thresholds in Table 2 is to allow the reader the freedom to make his/her own judgments in relation to the effectiveness of the strategic planning programs. At this point the author had to make some choices in order to proceed and chose to select a threshold of 50% on the basis of the amount of time which had elapsed since the start of each plan. Ongoing work was included primarily to ensure comparability with the self study programs. The effectiveness statements for the strategic planning programs therefore read as follows:

- SP1 has 11 of 13 goals (84%) which are at least 50% complete
- SP2 has 6 of 8 goals (75%) which are at least 50% complete
- SP3 has 27 of 31 goals (87%) which are at least 50% complete

The results of the goals-based impact assessment based on document analysis therefore suggest that the strategic planning programs were effective as the majority of goals of all programs were at least 50% complete. These results were then triangulated with the views of informants. Table 3 illustrates the responses by category to this question. Overall two thirds of informants thought that strategic planning in IT Tralee achieves some or all of its aims. It should be noted that this masks some quite polarised views however as three informants were relatively certain that it did not achieve any of its aims.

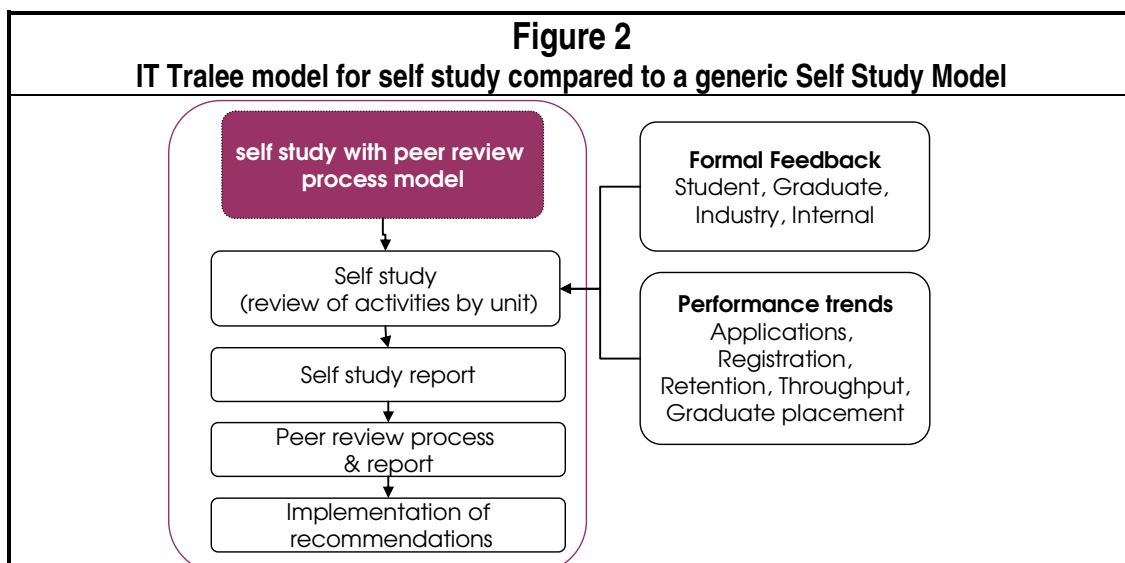
Response category	Strategic Planning	Self study
Program achieves all of its aims	5	13
Program achieves some of its aims	7	4
Unsure	2	0
Program achieves none of its aims	3	0
Total	17	17

¹ An objective relating to “ongoing” work might for example be stated as “To act as a catalyst for social and cultural development by making available Institute resources, centres and expertise”.

Informants were asked to identify other impacts (both positive and negative) which resulted from the strategic planning programs. The impacts most frequently cited by informants included concepts such as (i) building shared vision (cited by 66% of informants) (ii) improved strategic thinking (50%) (iii) additional overhead (50%) (ii) improved process management (33%) (iv) improved capacity for implementation of objectives (33%). The additional overhead was the only negative impact associated with both the strategic planning and self study programs, reinforcing the case for minimising the overhead involved through integration of the programs.

4.2 The effectiveness of the self study programs

Similar evaluations were undertaken for the self study programs which is reported on in detail in (Lillis 2006a). Unlike the strategic planning programs self study is a well established method of quality assurance both in the Institute and in higher education in general. All of the self study programs were initiated to meet an external requirement linked to the accreditation status of courses of study (Lillis 2006a). All three self study programs fit within the Van Vught and Westerheijden model for self study programs (Van Vught & Westerheijden 1995) which is illustrated here in Figure 2. It is worth noting that the external peer review panels for all programs commended the processes undertaken in their reports (ITT 2001a; PR1 2001; HETAC 2004b; ITT 2005). All components of the three self study programs were implemented largely 'as-intended' and a degree of confidence can be placed on the impact assessments which follow. There were some minor deviations in that DA1 differed from PR1 and PR2 as it was in essence a summative evaluation - it made a judgment as to whether the Institute met certain criteria or not. The external peer review panel report therefore did not contain formative elements e.g. recommendations for improvement in the Institute. Unlike PR1, in PR2 it was decided that revisions to courses would occur in tandem with a planned Institute-wide modularisation project at a later stage.



There is some evidence that there was a lack of follow through on the implementation of the recommendations arising from the self study (Lillis 2006a). This suggests that a formal review of the implementation of the recommendations arising from the self study programs, a ‘*post-implementation audit*’ should be incorporated in an integrated planning and evaluation model.

A summary of the goals of the three self study programs is given in Appendix A.3 and the basis for the impact assessment is outlined in Appendix A.4. Detailed methodological descriptions are available in (Lillis 2006a). Table 4 summarises the degree to which the programs met their objectives (including implementing the peer review recommendations).

Table 4			
Meeting goals and objectives – self study programs			
[Data source : program impact assessments]			
Ref	Delegated Authority (DA1)	Programmatic Review 2000/01 (PR1)	Programmatic Review 2004/05 (PR2)
<i>Objectives</i>	4	19	23
<i>Objectives completed</i>	4 of 4 (100%)	16 of 19 (84%)	14 of 23 (61%)

Table 4 shows that the substantive majority of objectives were met in each of the programs. The effectiveness statements (using a 50% threshold) therefore read as follows:-

- DA1 met 100% of its objectives
- PR1 met 84% of its objectives
- PR2 met 61% of its objectives

The results of the goals-based impact assessment based on document analysis therefore suggest that the self programs were effective as the majority of objectives of all programs were at least 50% complete. These results were triangulated with the views of informants. Table 3 earlier illustrated the responses to this question and the table shows that all informants believed that self study had achieved some or all of its aims. It is interesting to note that most informants were relatively certain in their initial responses (in contrast to the strategic planning programs). For example some of the immediate responses to the question were:-

“Yes, in my view”	“Oh yes”
“As far as we are concerned, yes”	”Yeah, I think it did”
“I think yes”	“Yes, I think it did”
“It did in the overall sense”	“Well, yes”

Interviews with informants were used to identify other impacts (both positive and negative) which resulted from the self study programs. The main impacts cited included (i) building shared vision (cited by 50% of informants) (ii) additional overhead involved (50%) (iii) the opportunity to review activities (33%) (iv) process management (15%) and (v) involving stakeholders (15%).

4.3 A comparison of the effectiveness of the strategic planning and self study programs

To inform the development of an integrated planning and evaluation model a key question which needs to be answered is what programs were the most effective in leading to improvements. As the programs have different process models this is a relatively complex issue and a direct comparison is difficult. The programs were ranked by taking cognisance of the following criteria (i) the degree to which the programs met their goals (ii) whether they tackled core academic issues (iii) the percentage of outcomes that could be ascribed to the program (net outcomes) (iv) whether informants perceived the programs to be effective and (v) other improvements arising.

4.3.1 The degree to which the programs met their goals

It was argued earlier that the effectiveness of the programs should be judged when a threshold of 50% for completion of objectives was set. The threshold of '50% complete' can also be interpreted as '50% incomplete' however and is open to the criticism that easier objectives were completed and more difficult issues were avoided. There is evidence to suggest that this is the case for SP1 for example. Some objectives in relation to academic initiatives were not tackled (e.g. retention initiatives, modularisation etc). Many of these issues resurfaced in SP2 which indicates that they were still considered important. On balance therefore the '50% incomplete' threshold needs to be taken into consideration when comparing the strategic planning and self study programs.

4.3.2 The degree to which the programs tackled core academic issues

A key measure of effectiveness is the extent to which the programs led to improvements in the academic heartland (Clark 1998) as the operating core of a HEI. The goals of the strategic planning and self study programs were categorised as to whether they related to academic activity or not². Table 6 shows the results of this.

Criteria	SP1	SP2	SP3	DA1	PR1	PR2
Total goals	13	8	31	4	19	23
Academic goals	4	3	22	3	12	16
Completion of academic goals	2 of 4 (50%)	2 of 3 (66%)	19 of 22 (86%)	3 of 3 (100%)	11 of 12 (92%)	11 of 16 (69%)

It can be seen from Table 6 that the institutional strategic planning programs had a relatively small number of goals relating to core academic activity and that they were generally less effective for academic than non-academic goals. Some difficulties were identified with their effectiveness in tackling core academic issues. The self study programs on the other hand were more likely to concentrate on core academic goals and were more effective in tackling these goals.

² Academic goals were those that required the input of academic staff (e.g. course development, research etc). Some goals had a mix of academic and non-academic objectives. If more than 50% of the objectives related to academic activity the goal was categorised as academic.

4.3.3 The percentage of outcomes that could be ascribed to the programs (net outcomes)

To get a true measure of effectiveness it is important to distinguish between outcomes which can be directly attributed to the programs and those which would have arisen regardless. A net outcome is the difference between an observed outcome of the program (gross outcome) and the outcome which would have occurred anyway, all other things being equal (Rossi *et al.* 2003). Table 7 summarises the percentage of outcomes of the programs that can be directly ascribed to the program (net outcomes).

Criteria	SP1	SP2	SP3	DA1	PR1	PR2
Completed/ongoing objectives originating within the program	10 of 43 (23%)	1 of 39 (3%)	8 of 35 (23%)	3 of 4 (75%)	7 of 19 (37%)	7 of 23 (30%)

Table 7 shows that the self study programs overall had a higher percentage of outcomes that could be ascribed to the programs.

4.3.4 The degree to which informants perceived the programs had met their goals

Table 3 earlier showed that informants were more certain that the self study programs had met their goals. Informants were also asked a direct question in relation to which of the two sets of programs they thought was most effective in leading to improvements and why. The responses to this question can be categorised as those that thought they were too integrated to make a distinction (n=11) and those that saw a clear difference (n=6). Of those that made a clear distinction n=5 thought self study was most effective. One noted that

“The self study (was more effective)... the strategic plan for the college seems to be that bit distant whereas the self study is that bit more parochial and you feel you do have a little bit more control over it”

4.3.5 Summary

Table 8 overleaf summarises the effectiveness of the programs under the criteria established for comparison.

Criteria	SP1	SP2	SP3	DA1	PR1	PR2
Goals (50% threshold)	84%	75%	87%	100%	100%	100%
Effectiveness on core academic issues	50%	66%	86%	100%	92%	69%
Net outcomes	23%	3%	23%	75%	37%	30%
Informants	66%			100%		
Percentage of informants citing other impacts (positive)	building shared vision (66%); improved strategic thinking (50%); Improved process management (33%); improved implementation (33%)			Building shared vision (50%); opportunity to review activities (33%); stakeholder consultation (15%); improved process management (15%)		
Percentage of informants citing other impacts (negative)	Overhead involved (50%); implementation (33%); process management (33%)			Overhead involved (50%); implementation (15%); process management (15%)		

5 Steering by engagement - an integrated planning and evaluation model

A model for integrated planning and evaluation is presented in this section and the rationale behind it is discussed and justified with reference to the literature base. The model can be best described as the middle ground between a 'top down' and 'bottom up' process. It is in effect a "steering by engagement" approach using Clark's terminology (Clark 1998). The steering core is strengthened through meaningful engagement with the academic heartland and the model integrates some of the strongest features of the strategic planning and self study programs in a "Review – Plan – Implement" iterative cycle. It was developed by paying particular attention to the effectiveness of the strategic planning and self study programs in this study and it streamlines the overlap between the programs.

Although grounded in empirical evidence the framework is intended as a first step only and the author cautions that its generalisability is untested beyond the context of one particular Irish Institute of Technology. Work is underway at present to validate the model in four other Irish Institutes (Lillis & Thorn 2006). Notwithstanding this the author believes the model may be a useful contribution to discussions on an integrated planning and evaluation framework for higher education.

A number of assumptions have been made. The model assumes that the HEI has to meet external reporting requirements (e.g. produce a strategic plan for its funding agency) and assumes that some form of institutional, faculty and/or departmental level self study is required periodically to meet quality assurance requirements. Notwithstanding philosophical stances on the nature of strategy (Whittington 1993) the model assumes that the HEI makes deliberate efforts to plan long term. Each component of the model can be treated as a 'black box' where a HEI is free to design a process to suit its context.

5.1 Rationale and justification

Mintzberg notes that the more complex and dynamic the environment of an organisation the more decentralised and organic its structures need to be in response (Mintzberg 1998). Birnbaum concurs that in HEIs when change is frequent and there are no precedents a 'loosely coupled', adaptable approach is needed with decentralised controls (Birnbaum 1988). Thys-Clement and Wilkins (Thys-Clement & Wilkin 1998) and Bayenet *et al* (Bayenet *et al.* 2000) contend that a mixed model approach is needed which merges aspects of the 'top down' and 'bottom up' approach with a mix of proactive and reactive strategies.

There is consensus in the literature that to be effective strategic planning has to engage with the academic heartland and therefore the extent of a consultative process is a major factor in process design in higher education (Bayenet *et al.* 2000; Birnbaum 2000; Shattock 2002; Davies 2004; Henkel 2004; Tabatoni *et al.* 2004). This study is particularly interesting as it allows us to compare strategic planning, which is essentially a top down process with self study, a bottom up process. Preliminary results from further work by the author suggests that there is a strong correlation between the level of engagement of the academic heartland and the effectiveness of the programs – the more engagement the more effective the programs were.

Clark contends that a 'strengthened steering core' is a key feature of an entrepreneurial university and that improved steering capacity embraces both central management and academic units and transcends the top, middle and bottom layers of

the organisation (Clark 1998). He maintains that this can be achieved by the active engagement of the academic heartland in institutional decision making and by setting a strong direction which is shared throughout but which also enhances initiatives emerging from all levels. This should be done in such a way as to remove unnecessary barriers between the academic units and the Centre and by increasing authority and responsibility at all levels. Preliminary findings from further work by the author suggest that a strengthened steering core was a key factor in the effectiveness of the strategic planning and self study programs. The most effective program (DA1) exhibited all of the characteristics of strengthening the steering core for example. The strategic planning programs and the DA1 self study program went some way toward reconciling traditional academic values with managerial practices. The crux of the issue was the programs' ability to avoid collective responsibility on academic issues which required co-ordination across Schools and Departments and it was established that in general the strategic planning programs did not address this issue. Lines of responsibility were more clear cut in the self study programs however as the School was responsible for implementing the relevant outcomes.

The ability of the programs to increase responsibility and authority at all levels and the level of engagement appear to be the most important factors in their effectiveness. It was inconclusive whether one or other of these factors in isolation is most factor or whether it is the combination of both.

5.2 Model Outline

At its simplest level the 'Steering by Engagement' framework can be seen as an iterative "Review-Plan-Implement" cycle as outlined in Figure 3.

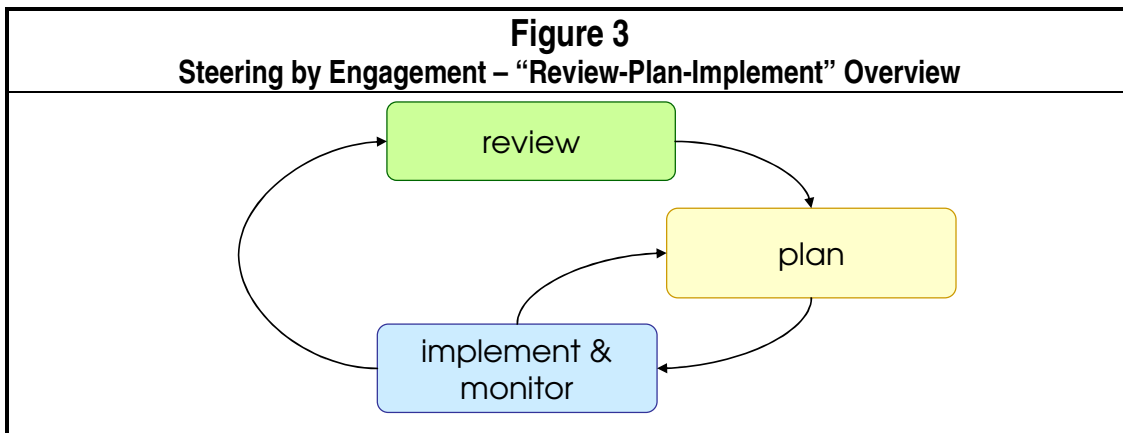
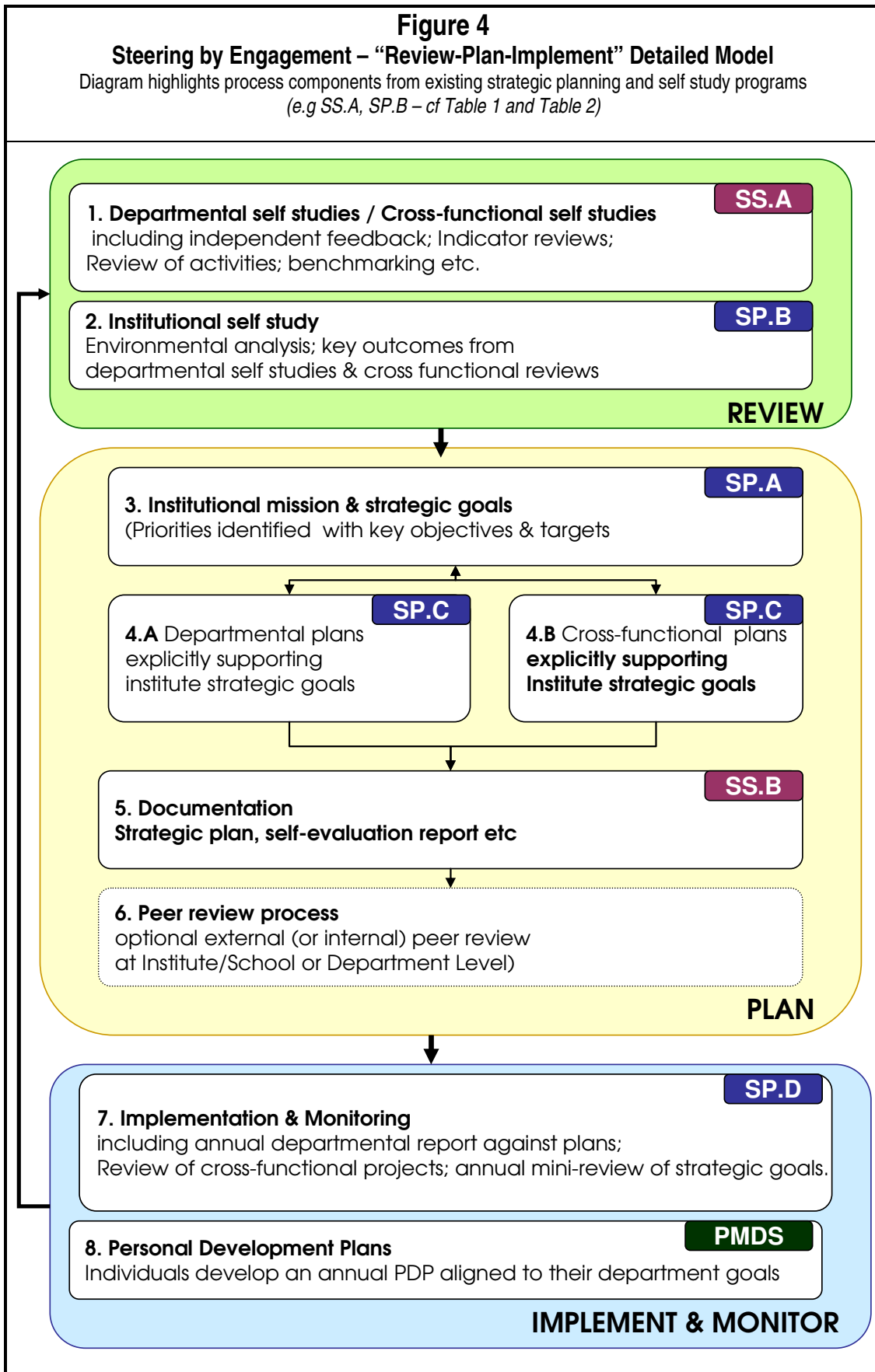


Figure 4 overleaf presents the model in diagrammatic format which is outlined in detail in the sections that follow.



Review

The cycle starts with a comprehensive review stage with self studies undertaken by academic, central services and cross-functional review teams as appropriate. Strong central guidance is provided in relation to the scope of the self study. All self study teams ask similar questions of themselves but also have some freedom to extend the scope of the exercise to their particular contexts. This should be a rigorous and systematic review supported by formal environmental feedback mechanisms (e.g. graduate and industry surveys) and a review of trends in key performance indicators (e.g. registration numbers, retention, throughput etc). Self study teams produce self evaluation reports to an agreed template which differentiates between outcomes which can be progressed locally and recommendations for institute-level consideration.

The institution-level outcomes are collated centrally to inform the wider institutional self study. The institutional self study stage takes macro-level issues into account includes a comprehensive environmental analysis (e.g. SWOT analysis phase of the rational strategic planning model).

Planning

Informed by this root and branch review an institutional planning phase then follows in which the strategic goals and main objectives are set. This phase takes the outcomes from the departmental and institutional review phase into account but also has the freedom to brainstorm and develop new ideas. Using the '*black box*' approach the HEI is free to use whatever methodology it believes is most appropriate to its setting to develop goals and objectives. The mechanisms by which strategic objectives will be evaluated, major resource implications, risks and changes to the organisation structure are identified at this stage.

Once institutional strategic goals and objectives are set each department then develops its own strategic plan which explicitly addresses institutional strategic priorities. In parallel cross-functional project teams are established to progress relevant strategic objectives.

A two way communications process is an essential component of this model. Formal feedback is provided to departmental self study teams in relation to why their recommendations were/were not incorporated in institutional plans to increase the transparency of the process. Departmental plans also take cognisance of resource issues and major changes required. Mapping institutional goals to departmental plans provides a strong steering core to but allows departments some flexibility to include their own ideas. Departments have the flexibility to include additional department-specific issues (perhaps with the caveat that in resource allocation priority will be given to institutional objectives).

The documentation phase essentially captures the outcomes of both the review and planning phases. An institutional self-evaluation report can be produced to meet the requirements of the Quality Assurance agency. The strategic plan is produced in the format required by the funding agency or in a printed brochure format for public relations purposes. Faculty or departmental reports can be produced for course accreditation purposes. A multitude of formats and views can be produced but crucially all of them draw from same knowledge base. For this reason the review and planning phases should take place within a short period of time (no more than one academic year) to maintain momentum and currency.

Many accreditation agencies require an external peer review process for institutional self study. Appropriate peers can bring further fresh thinking to the

organisation, can contribute valuable suggestions for improvement and can provide an element of benchmarking from their own experiences etc. Peer review remains a strong moderating force in the academic heartland and can be used as an additional lever for change initiatives but it is not generally a feature in institutional strategic planning models. The author contends however it is a useful exercise if only to bring closure to the review and planning phase.

Implementation & Monitoring

In addition to putting plans into action the implementation phase incorporates an annual review of departmental / cross functional plans with each team providing a progress report against the original objectives of its plan and any recommendations arising from the peer review process. The review is carried out in partnership with the teams and is formative rather than summative in its approach. There is scope to retire or modify objectives or introduce new objectives on the basis of a changing environment. A mini-review of institutional goals and strategic objectives *viz a viz* a changing environment can be undertaken annually. This addresses the need for a fifth component to the self study model – the ‘*post-implementation audit*’ outlined earlier.

Under the Performance Management and Development system (PMDS) outlined earlier individual staff members develop their Personal Development Plans each year from the on the basis of their departments strategic plan (this is effectively the team development planning phase of PMDS).

Engaging the academic heartland

The “*Steering by engagement*” model engages with the academic heartland at three critical points. Firstly the academic heartland is involved from the outset in the initial self studies, the outcomes of which are collated for consideration at institutional level prior to setting institutional priorities. This provides departments with an opportunity to influence institutional goal setting, highlight their achievements and identify problematic areas. Discussions will most likely centre on issues which are of most relevance to the self study teams increasing their ownership of the process. Many issues from the departmental self studies will be common to some if not all departments which may mitigate against the tendency of not facing up to weaknesses as issues cited by some or all departments less likely to be ignored. This bottom up approach captures issues at the coal face and engages the academic heartland in the process from the outset.

The second critical point of engagement is when academic departments are asked to develop their own plans in support of institutional priorities. Instead of being asked to implement someone else’s predetermined strategies departments have the flexibility to develop their own solutions to the challenges presented as appropriate to their context. By comparison to a model where solutions are developed by a small group of sages at the top of the organisation this also significantly increases the chances that innovative solutions will be developed as the full capacity of the HEI’s staff, through their respective departments, is being harnessed. Senior management teams can concern themselves less with the detail and concentrate on how well or otherwise the Institution’s strategic objectives are being achieved.

The third point at which the academic heartland is engaged is through the development of annual Personal Development Plans which are aligned to their department’s objectives. This increases relevance, ownership and maps some responsibility from the department to the individual.

Strengthening the Steering Core

The ‘*Steering by engagement*’ model provides for this strong steering core at a number of key points. Firstly departmental self studies are undertaken under central guidelines to agreed templates. Responsibility for completing the self study rests with the department. Collation of institutional level recommendations from the departmental self studies acts as a funnel whereby common issues are filtered through to inform institutional review sessions. This increases cohesion and mitigates against special interest groups dominating or hijacking planning sessions to progress specific agendas. It also enhances the chances that weaknesses will be identified and addressed.

The second point where the model strengthens the steering core is at the institutional planning sessions. The comprehensive departmental and institutional review ensures that institutional goals are set on an informed basis. This is a considerably stronger starting point than the standard strategic planning model which depends primarily on a once-off environmental analysis. It also tempers the level of ambition of that rational strategic planning permits and ensures that the constraints of the operating environment are considered from the outset. Self study on its own is open to the challenge if all change is incremental and a projection from the current state of affairs no major changes are possible. The ‘*Steering by engagement*’ model takes the incremental changes proposed by the self study and provides an opportunity to compare them with the challenges faced by the Institution. Through a managed communication process departments can see the adequacy or otherwise of their proposed strategies in light of the changes in the environment and perhaps through comparison with other departments. The institutional planning sessions allow the HEI to take bold new steps into the unknown and radically change its direction if necessary but crucially this is done on an informed basis and tempered by the reality of the organisation.

The third point at which the ‘*Steering by engagement*’ model strengthens the steering core is when departments are asked to produce their plans in support of institutional goals. Departments have responsibility for this aspect of the process and are guided by central institutional goals. They have the freedom however to develop their own solutions and strategies to meet these goals which significantly enhances initiatives originating from all levels of the organisation.

Finally ‘*steering by engagement*’ requires a regular progress review system whereby departmental plans are reviewed annually with respect to the objectives set which again increases responsibility. The Personal Development Plans of the Performance Management and Development system increases the responsibility of the individual to assist in the attainment of the departments goals and are reviewed on an annual basis in tandem with the department’s plan.

7 Conclusions, recommendations & suggestions for further research

The results of the program evaluations for three strategic planning and three self study programs undertaken in the Institute of Technology Tralee over the period 1997-2006 were presented in this paper. The effectiveness of the programs was ranked by taking cognisance of the following criteria (i) the degree to which the programs met their goals (ii) tackled core academic issues (iii) the percentage of outcomes that could be ascribed to the program (net outcomes) (iv) whether informants perceived the programs to be effective and (v) other improvements arising. In addition a preliminary study on the effectiveness of a pilot implementation of the

Performance Management and Development system being rolled out in the Institute of Technology sector in Ireland was considered.

It was established that the self study programs were generally more effective overall in leading to improvements in institutional performance when all of these criteria are considered. The degree to which the programs engaged with the academic heartland was established as a key factor in their effectiveness – the more engagement the more effective the program. It was also established that the programs strengthened the steering core of the Institute through (i) the active engagement of the academic heartland in institutional decision making (ii) setting a strong direction which was shared throughout but which also enhances initiatives emerging from all levels (iii) removing unnecessary barriers between the academic units and the Centre and (iv) by increasing authority and responsibility at all levels. The two key factors in effectiveness appear to be level of engagement and the programs capacity to increase authority and responsibility at all levels.

A model for an integrated planning and evaluation framework, called '*Steering by Engagement*' was then presented. The model was designed to streamline and integrate the strongest components of the strategic planning and self study programs. The rationale behind the model was presented and it was justified on the basis of how it engaged with the academic heartland and strengthened the steering core. The author cautions that its generalisability is untested beyond the context of one Irish Institute of technology however.

Two recommendations arise from this study. The overhead involved in strategic planning and self study programs is significant and can be a distraction from core activity. While this model goes somewhat toward streamlining this overhead this can only be accomplished by careful process design and management. It is recommended therefore that Institutions consider resourcing this process management element through existing quality or planning structures. The second recommendation is that funding agencies, government departments and quality assurance agencies share subset of common information which they require on a regular basis from a HEI. Duplication and overhead within the HEI could be minimised if these agencies were to agree a common format and schedule for this information.

A number of areas for further research have been identified. Work is underway on validating the model in four other Irish Institutes of Technology to enhance its generalisability. Further work is currently being undertaken on how performance measurement can be aligned to support the model, on the influence of environmental factors and on mechanisms by which it can improve knowledge management and organisational learning.

7 References

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Appendix 1

Table 4.4 Goals and objectives of the strategic planning programs

[Data source : (ITT 2000; ITT 2001b; ITT 2004c)]

Program	Strategic Plan 2000-2006 (SP1)		Strategic Plan 2004-2007 (SP2)		School of Science (SP3)
Scope	Institute-wide		Institute-wide		School-wide
Goal	SP1 Goal	Evaluability Level	SP2 Goal	Evaluability Level	SP3 Goal Area ³
	Teaching & learning environment	3 - Capacity	Learners	3 - Capacity	Student and Courses goals
	Courses	3 - Capacity	Programmes	3 - Capacity	Student and Courses goals
	Access for under-represented groups	3 - Capacity	<i>included in Learners goal in SP2</i>		Student and Courses goals
	Research	3 - Capacity	Research	3 - Capacity	Research goal
	Entrepreneurship	4 -Ideological	<i>not included as a goal in SP2</i>		<i>** not included as a goal in SP3</i>
	Partnerships	3 - Capacity	<i>not included as a goal in SP2</i>		National policy goal
	Social & cultural	4 - Ideological	<i>not included as a goal in SP2</i>		<i>** not included in SP3</i>
	Staff	4 - Ideological	Staff	3 - Capacity	Student and Courses goal
	Physical Resources	3 - Capacity	Learning Environment	3 - Capacity	<i>Included in some objectives in SP3</i>
	Management & Operations	3 - Capacity	Mgmt & Operations	3 - Capacity	<i>Not included in SP3</i>
	IT/IS	3 - Capacity	<i>Included in Quality goal in SP2</i>		<i>Not included in SP3</i>
	Quality Assurance	4 - Ideological	Quality	3 - Capacity	<i>Included in some objectives in SP3</i>
	Marketing	3 - Capacity	<i>Included in Learners goal in SP2</i>		Student and Courses goal
			Funding	3 - Capacity	<i>Not included in SP3</i>
Objectives & Strategies	SP1 had 48 objectives supporting the 13 goals. The majority of objectives had detailed strategies.		SP2 had 43 objectives supporting the 8 goals. The majority of objectives had detailed strategies.		SP3 had n=138 objectives supporting the departmental goals an average of n=35 objectives per department. The majority of objectives had detailed strategies.
Prioritisation	12 objectives in SP1 were prioritised.		There was no prioritisation process in SP2.		There was no prioritisation process in SP3.

³ Although the four departments set broadly similar goals they differed in some areas. They are grouped in this table to allow a comparison with SP1 and SP2.

Table A2 Basis for impact assessment for SP1, SP2 and SP3

[Data source : Program Evaluations]

	SP1 Strategic Plan 2000-2006	SP2 Strategic Plan 2004-2007	SP3 Strategic Plan 2001-2006 School of Science & Computing
<i>Time series selection</i>	<p>🕒 September 2002 : covers the period September 2000 – August 2002 (24 months since start of SP1)</p> <p>🕒 December 2003 : covers the period September 2002 – December 2003 (39 months since start of SP1)</p>	<p>🕒 April 2005 : covers the period December 2004 – April 2005 (5 months since start of SP2)</p> <p>🕒 June 2006 : covers the period May 2005 – June 2006 (18 months since start of SP2)</p>	<p>🕒 March 2003 : covers the period September 2001 to March 2003 (18 months since start of SP3)</p> <p>🕒 May 2005 : covers the period April 2004 – May 2005 (31 months since the start of SP3)</p>
<i>Rationale behind time series selection</i>	<p>A formal progress review mechanism was not in place for the first 18 months of SP1.</p> <p>The progress on each objective was reviewed by the Director/Strategic Programme Office in October 2002 and again in December 2003 and a progress report was issued to all staff on both occasions which provides a natural point at which to assess progress.</p>	<p>April 2005 was the first formal review of SP2.</p> <p>June 2006 was chosen as the last available point before the write up and submission of this thesis.</p>	<p>A formal review of progress on SP3 was made during the DA self study process in March 2003 which included a peer review process. Detailed project plans for each department were not developed so there is no way of knowing in retrospect what timescale was originally envisaged for each of the objectives. A second formal review of progress was made during the School of Science and Computing Programmatic Review process in May 2005.</p>
<i>Data Source</i>	<p>Institute progress reports : Issued by the Director to all staff in the Institute in October 2002 and December 2003 (ITT 2002; ITT 2003)</p> <p>Log of Issues : evidence of progress on objectives and strategies was sought in the document record.</p>	<p>Ongoing progress reviews: status reports on each project. The progress on each objective was reviewed in April 2005 and a progress update document was issued to the Executive (ITT 2002).</p> <p>The Sustaining Progress Action Plan contained updates on a number of objectives of the SP2.</p> <p>Log of Issues : evidence of progress on objectives and strategies was sought in the document record.</p>	<p>DA self study reports : Departments progress reports for DA self study reports and reports of the peer review panels.</p> <p>Programmatic Review self study report: School self study report on strategic plans for Programmatic Review in 2005 and reports of the peer review panels.</p> <p>Log of Issues : evidence of progress on objectives and strategies was sought in the document record.</p>
<i>Notes</i>	<p>The definition of completion used in this progress report was “<i>that the objective/strategy had been completed at least once</i>” which is a consideration when viewing the outcomes of this impact assessment.</p>	<p>The shorter timeframe of SP2 needs to be taken into account.</p>	<p>.</p>
<i>Appendix Reference</i>	A4.4.1	A4.4.2	A4.4.3

Table A3 Goals and Objectives of self study programs [Data source : program evaluations]

Program	Delegated Authority Self Study (DA1)	Programmatic Review 2000/01 (PR1)	Programmatic Review 2004/05 (PR2)
<i>Scope</i>	Comprehensive review of all operations in the Institute to include governance, management and planning processes; quality assurance processes; educational and training programmes; research activities; support services and others; conditions attached to Delegated Authority & Qualifications Act.	School/Department activities including quality assurance; performance indicators; employment of graduates; national and international transfers; courses of study and syllabi; facilities; staff development; links with stakeholders; research and consultancy; delivery methodologies; adult education.	School/Department activities including quality assurance; performance indicators; employment of graduates; national and international transfers; courses of study and syllabi; facilities; staff development; links with stakeholders; research and consultancy; delivery methodologies; adult education.
<i>Goal</i>	<p>The Qualifications Act 1999 provided the legislative framework by which Institutes could purpose Delegated Authority by adhering to criteria established by the Higher Education and Training Awards Council(HETAC 2004a).</p> <p>The goal of DA1 was stated by the Institute as to ensure <i>“the Institute is granted authority to make awards, at particular levels, across all three Schools”.</i> (ITT 2004a)</p>	<p>Stated by HETAC as ensuring <i>“(a) quality improvements are made to programmes of higher education and training and (b) programmes remain relevant to learner needs, including academic and labour market needs”.</i> (HETAC 2002)</p>	<p>Stated by the Institutes Quality Assurance procedure (A7) as ensuring that each programme/suite of programmes</p> <ul style="list-style-type: none"> • contributes to the achieving of the Institutes aims ... • offers a valuable educational experience to learners • ...the skill set and knowledge of the graduates is relevant • are benchmarked against similar programmes • takes cognisance of the National Qualifications Framework ... • complies with all the requirements of the approved external validating body • ...are assessed in terms of the resources required to deliver same. (ITT 2004b)
<i>Objectives</i>	<p>The objectives as set by the Institute were</p> <ol style="list-style-type: none"> 1. To review the effectiveness of the work undertaken since 2000 in preparation for Delegated Authority and to internally assess our state of readiness for same..... 2. To ensure the activities of each individual department were aligned to the overall Strategic Plan and to complete the implementation of the Strategic Management Framework..... 3. To identify areas for improvement in terms of concrete actions 4. To design and implement a pan-Institute framework for continuous improvement <p>(ITT 2004a)</p>	<p>The objectives as set by HETAC were</p> <ol style="list-style-type: none"> 1. To review the development of the courses over the previous five years with particular regard to the achievement and improvement of quality 2. To evaluate the flexibility of the School to the changing needs of students, employers and to all stakeholders in the process 3. To review the range and mix of assessment procedures experienced by participants on the various programmes 4. To review the plans for future development and assess the viability of same (HETAC 2002) <p>Internal : Two strategic plan objectives referred to PR1 for implementation (#7.2.1, #7.2.2). Extend strategic planning methodology to School.</p>	<p>PR2 retained the original four HETAC and five additional objectives were set as part of the Institute’s own procedure:-</p> <ol style="list-style-type: none"> 1. to analyse the effectiveness and the efficiency of each of the courses approved 2. to evaluate the physical facilities provided by the Institute ... 3. to review the School’s/Department’s research activities and projections in the area of study under review 4. to evaluate the formal links the School and Institute have established with industry/business 5. the School’s plan for the succeeding five years... <p>(ITT 2004b)</p>

Table A4 Basis for impact assessment for DA1, PR1 and PR2

	DA1 Delegated Authority Self Study 2003-2004	PR1 School of Science and Computing Programmatic Review 2001	PR2 School of Science and Computing Programmatic Review 2005
<i>Time series selection</i>	<p>May 2005 : covers the period May 2004 to May 2005 (12 months)</p> <p>June 2006 : covers the period June 2005 – June 2006 (24 months)</p>	<p>March 2003 : covers the period September 2001 – March 2003 (18 months)</p> <p>May 2005 : covers the period April 2003 – May 2005 (31 months since start of PR1)</p>	<p>Jan 2006 : covers the period June 2005 to January 2006 (6 months)</p> <p>June 2006: covers the period January 2006 – June 2006 (12 months)</p>
<i>Rationale behind time series selection</i>	<p>May 2005 was chosen as the Programmatic Reviews in the School of Science and School of Engineering provided an opportunity to review progress on DA1. June 2006 was chosen as the last available time point before the submission of this thesis.</p>	<p>March 2003 was chosen as progress was reviewed as part of the self study undertaken as part of the Delegated Authority process(DA1_CP 2003). May 2005 was chosen as the second Programmatic Review Process in the School of Science was completed then (PR2 2005).</p>	<p>January 2006 was chosen as the School of Science management team reviewed the programmatic review recommendations following approval of the report at the Academic Council in November 2005. The plan for implementing the recommendations was presented to the School of Science School Board in January 2006. June 2006 was chosen as the last available time point before the submission of this thesis.</p>
<i>Data Source</i>	<p>Programmatic Review reports : School of Science & Computing and School of Engineering & Construction Studies Programmatic Review self study reports. Reports of the external peer review panels for these programs.</p> <p>Log of Issues : evidence of progress on objectives and strategies was sought in the document record.</p>	<p>DA self study reports : Departments progress reports for DA self study reports and reports of the internal and external peer review panels.</p> <p>Programmatic Review self study report: School self study report on strategic plans for Programmatic Review in 2005 and reports of the internal and external peer review panels.</p> <p>Log of Issues : evidence of progress on objectives and strategies was sought in the document record.</p>	<p>School board presentation : January 2006 – update on status of programmatic review recommendations made to School of Science School board by Head of School. Minutes of meeting of school of science management team where action on programmatic review recommendations was decided.</p> <p>Programmatic Review self study report: Reports of the internal and external peer review panels.</p> <p>Log of Issues : evidence of progress on objectives and strategies was sought in the document record.</p>
<i>Appendix Reference</i>	A4.5.1	A4.5.2	A4.5.3
<i>Notes</i>			The shorter timeframe for the impact assessment of PR2 (12 months) needs to be taken into consideration.