



N C P S T

National Centre for
Plasma Science & Technology

Quality Improvement Plan

18 December 2006

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1. The NCPST Response to PRG Recommendations

Recommendations for Improvement for NCPST 2006

The following notation is used in the recommendations for improvement.

P1: A recommendation that is important *and* requires urgent action.

P2: A recommendation that is important, but can (or perhaps must) be addressed on a more extended time scale.

P3: A recommendation which merits serious consideration but which is not considered to be critical to the quality of the ongoing activities in the Unit.

Additionally, the PRG indicate the level(s) of the University where action is required:

A: Administrative Unit

G: Group Action

U: University Executive/Senior Management

S: School

F: Faculty

O: OVPR

	Addressee	Priority	PRG Recommendation	Response
1	A	P 1	The Centre needs to structure its research activities into larger, easily identifiable units. Such a structure would provide an easy-to-recognize identity for the Centre, internally and externally, which at present is lacking (p. 4).	The NCPST Technical Committee was charged with addressing this point – in July 2006, following an election procedure, Dr. JP Mosnier was elected Chair of this committee. At a plenary session on 23 August 2006 the following core research competencies were provisionally agreed.

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				<p>“Sustainable Energies from Plasmas” “Nanoscience and Photonics” “Modelling” “Instrumentation and Measurement” “Astrophysics”</p> <p>Two Research Priority Areas were identified: “Plasma Technology for Nano-Manufacturing” “Fusion Energy Research”</p> <p>At this meeting it was suggested that the NCPST would follow this structure, i.e. members would assign themselves under a core research competency rather than small school based subgroups.</p>
2	A	P 1	In addition to further developing core plasma competence, cross-disciplinary programs leveraging off core plasma expertise need to be fostered (p. 4).	<p>As mentioned in point 1 the new structure should facilitate collaborations between PIs from various Faculties/Schools/Units/Research groups around multidisciplinary projects.</p> <p>There are a number of cross disciplinary projects that are currently being grown and developed primarily under the areas of ‘control’ and ‘biocompatible surfaces’</p> <p>The NCPST is currently developing its internal programmes and budgets for 2006/2007 for submission to the Office for the Vice President for Research (OVPR) for its annual</p>

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				recurrent funding. Within this programme for development an internal call has been made for 'special initiative projects' for which we could seek special support funding.
3	A	P 2	The Panel recommends (p. 4) that the low temperature plasma work regroup itself appropriately the laser-plasma people actively seek links with the wider NCPST group the Centre should foster good binary interactions, which might grow into larger themes, and prune away those interactions which have run their course the materials processing groups consider appropriate realignment	Following the Quality Review Process the NCPST carried out an internal reaffirmation of membership procedure along with a process for the admittance of new members. 21 of the original 22 members affirmed their membership in writing and one new member was accepted. As mentioned above the NCPST will follow a structure where members are involved under a core research competency rather than small school based subgroups. It is expected that this structure will enhance and foster cross disciplinary collaboration
4	A	P 1	The PRG encourages the Centre to engage itself in a series of regular and frequent, internal seminars. An active internal seminar series is the first step towards building more active internal collaborations (p. 4).	The NCPST has established a seminar series run on the last Friday of every month – this series started in April 2006 and has run every month since. There are typically two 30 mins talks. (Tea/Coffee and muffins are served at these sessions!!) A quarterly half day plenary session has also been established. These sessions, the first of which was held on

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				<p>24 May 2006, focus on broader research issues across the NCPST with presentations from team leaders as well as discussion forums on future direction etc. Further meetings were held on 23 August 2006 and 22 November 2006.</p> <p>The NCPST also introduced a one day postgraduate research seminar where each postgrad within the centre is encouraged to give a presentation. There will be prizes for the best presentations. The first seminar took place on 22 September 2006</p> <p>To complement these initiatives the NCPST makes copies of the presentations available on its website.</p>
5	A/ O	P 3	The boundary between the NCPST and other DCU research centres (UDRCs) needs some clarification (p. 4).	In order to address this point the NCPST carried out an internal reaffirmation of membership procedure. A copy of the NCPST Charter and Membership criteria is attached for information. 21 of the original 22 members affirmed their membership in writing.
6	U/ A/ O	P 2	Some activities are only very peripherally or not at all "plasma" and dilute NCPST focus. The PRG recommends that the Centre reexamine these activities and prune where necessary (p. 4).	<p>To address this point the NCPST have undertaken the following steps:</p> <ul style="list-style-type: none"> - Reaffirmation of membership of NCPST - Establishment of core research competency groupings - Elected a chair of the NCPST Technical Committee to

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				<p>steer the core research themes of the NCPST – The Technical Committee meet every quarter at plenary sessions.</p> <p>- Establishment of plenary/seminar sessions to enhance the communications and collaborations within the Centre</p> <p>Senior management is supportive of this recommendation and will try to facilitate such a re-examination by NCPST</p>
7	U/ O/ F	P 1	The University and its Research Centres, with external assistance, should consider the management structures of research centres generally with a view to identifying 'best practice' structures. The need for clear and unambiguous leadership and leadership structures is critical to the Centre's future development (p. 8).	All four PRTLTI supported centres are very different. It would be useful to review the management structures (with external assistance) of the centres in DCU. This will be done as part of the research assessment process.
8	A	P 1	The University should review the dual reporting mechanism outlined here to ensure goal congruence in the context of strategic and operational decision-making. Furthermore, the Review Panel did not have sight of formal reporting responsibilities vis-à-vis financial and other obligations. It would be desirable to establish and/or clarify such responsibilities: this is where 'operational reporting' to the Faculty becomes most concrete (p. 8).	<p>In an attempt to address this point the NCPST has clarified its own internal management structure and is working with the Faculty and the OVPR to ensure clarity in its reporting functions to the University.</p> <p>See response to recommendation 7 above. Such a review could include a review of the dual reporting mechanisms.</p>
9	A	P 2	Important elements of the Management Board should be put into practice as outlined (p. 8).	As mentioned above the management structure of the NCPST has been clarified.

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10	A	P 1	In particular, communication to all staff should be improved and should be a regular part of the fabric of the Centre. NCPST managers should foster a whole Centre identity across all groups by (p. 8): making decisions using clear and transparent processes, consulting at the appropriate level, and communicating decisions effectively with all members.	<p>A clear management structure has been defined with representatives from all groups within the NCPST to ensure the input from all levels to the decision making process and to ensure the communication of these decisions to all members of the Centre.</p> <p>In the communication process the NCPST has also undertaken the following measures :</p> <p>The NCPST has established a seminar series run on the last Friday of every month – this series started in April 2006 and has run every month since. There are typically two 30 mins talks. (Tea/Coffee and muffins are served at these sessions!!)</p> <p>The NCPST website has also been completely redesigned, providing a clearer and more profession image of the Centre – the website has also incorporated level 1 accessibility format to support disabled web users.</p> <p>The NCPST has published its first quarterly newsletter in Sept 2006.</p> <p>Other measures see above, recommendation 4.</p>
11	A	P	The 'Technical Board' should be formalised as a 'Research	Dr. JP Mosnier has been elected (July 2006) as the Chair of

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		3	Committee' whose remit is to address the issues outlined (p. 8).	<p>the NCPST Technical/Research Committee. The remit of the Technical Committee is to drive the technical focus of the NCPST. At a plenary meeting in Aug 2006 the members of the NCPST assessed its core research competencies and research priority areas (see recommendation 1 above)</p> <p>Most National and European programmes are informed by themes or priorities. The Tech Committee will co-ordinate and focus the efforts of individuals to develop research strengths aligned with funding programmes and NCPST Strategic priorities.</p> <p>Representatives from the core competency areas and technical chair and director and executive director meet on a monthly basis to identify :</p> <ul style="list-style-type: none"> - Joint funding opportunities (with ahead of grant application deadlines) - New research avenues and opportunities - Strategic alliances with external institutions
12	A	P 1	<p>NCPST is encouraged to reach for its goal of research excellence by (p. 10):</p> <p>forming a sub-committee responsible for sustaining funding</p> <p>inviting the technical board to conduct a foresight task to determine the priority areas for plasma research most accessible to NCPST staff and facilities</p> <p>fostering research funding applications developed in sympathy with</p>	<p>A 'research funding' subcommittee has been established – this committee is composed of the Director, Executive Director and Operations manager – this group has identified a number of research funding opportunities and is coordinating with the Technical/Research Committee application for funding.</p>

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			the areas identified agreeing a formula for attracting funding to NCPST support staff with every application	<p>The Technical/Research Committee will carry out a foresight exercise to determine the priority areas for plasma research most accessible to NCPST staff and facilities – This task is to be taken on by a subgroup of the committee This subgroup was established in Sept 2006 and has reported back to the committee in October 2006.</p> <p>The point raised by the PRG on ‘agreeing a formula for attracting funding to NCPST support staff with every application’ is somewhat difficult to address as the rules for funding are typically set by the funding body with little or no input from funding applicants and so therefore the most reasonable formula that can be provided is that when applying for funding each applicant should consider if under the scheme they are currently applying under whether any direct costs for support staff can be included. Overhead which is allowable on some contracts is dealt with under the DCU Overhead policy.</p>
13	O	P 1	If NCPST is to operate as an integrated research centre the University will need to find a mechanism to provide funding for the core activity (p. 10).	The funding allocation to date has been fully against three cycle one centres and is to fund centre focused activities such as management, administration, technical and other support. This has significant implications from a budget perspective. It is planned to move towards performance based funding allocation.
14	A	P 3	The self-assessment report indicates that the recent restructuring ‘has led to a centralising of . . . resources to allow them to be utilised for	The current model of centralised administrative and technical support while limited in its capabilities due to lack of

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			<p>the development and growth of the Centre into a world class research institution'. This particular resource model has the potential to disperse rather than focus funding. In that context, particular care should be given to allocating resources in a transparent, focused way to specified areas of strength/potential strength (p. 10).</p>	<p>resources - it is providing the Centre with a heart. The Executive group take considerable care to ensure the efficient and effective use of the central resource, regularly reviewing current project and monitoring and approving additional activities taken on by the central resource.</p>

2. One Year Quality Improvement Plan

Initiative	Description	Desired outcome	Start Date	Duration	Budget (amt and Source)	Responsible
Seminar Series	One hr seminar with two speakers preferable from two different disciplines to be held last Friday of every month with tea/coffee and buns!	Increased communications-interactions across Centre – also increased awareness of activities within Centre	28 April 2006	Ongoing	~€1,000 per annum – NCPST Recurrent	OM
Plenary Sessions	Half day meeting w/ tech presentations from NCPST PI's – discussion forum for research direction of NCPST	Increased communications – focusing of core competences and formation of collaborations	24 May 2006	Ongoing	~ €2,000 per annum – NCPST Recurrent	OM
Structure	The NCPST Technical/Research Committee is implementing a structure along core research competencies	Such a structure should facilitate collaborations between PIs from various Faculties/Schools/Units/ Research groups around multidisciplinary projects.	August 2006	Ongoing		TC
Web-site	The NCPST website to be redesigned to project more professional appearance and allow more frequent up-dating of information	Enhanced image of NCPST & Communications both internal to Centre and to University/Funding Bodies/Collaborators etc	June 2006	4 mts – new launch – 1 October 2006	€6,000 – NCPST Recurrent	OM
Postgraduate Seminar	An annual event where postgrads from the NCSPT present their work in short concise talk to an external panel with a prize for top presentations	Increased communications, improvement of presentation skills of postgrads, social event	Sept 22, 2006	Ongoing	€2,000	OM
Funding subcommittee	Small committee established to address future funding needs of Centre	Maintain and increase funding levels in Centres Strategic research areas	June 2006	Ongoing	0	ED
Membership	Affirm membership of Centre	To ensure all members are	June 2006	Ongoing	0	OM

affirmation		aware of the opportunities and responsibilities of being member of Centre	(and biannually thereafter)			
RSS System	To ensure that all PI's within the Centre have a complete and up to date entry on the RSS System	Enhance profile of Centre	October 2006	4 mts and updating 6mtly thereafter	€5,000	OM

OM : Operations Manager, ED : Executive Director

3. Three Year Quality Improvement Plan

It is anticipated that all of the initiative set out in our 'One Year Plan' will be continued ad infinitum. The following is a list of additional initiatives that we plan to have in place within the next 3years, and beyond.

Initiative	Description	Desired outcome
Two professorial level appointments	The NCPST are seeking to have at least two professorial level appointment made within the next 2-3 years.	Strengthen the NCPST 'sustainable energy from plasmas' and 'nanoscience and phototonics' theme areas
Centre of Excellence for Science Engineering and Technology	To have developed a programme of co-ordinated long term (5 yrs) funded research projects drawing on the core competencies of the NCPST and delivering scientifically in the advancement of understanding and technically to industrial partners and the generation of IPR.	Centre with world renowned profile providing timely and highly relevant science and technology deliverables to both national and international industry, academia and society
Top 3 placement in world	Using the following metrics : <ul style="list-style-type: none"> total citations as an impact metric (current position in 2005 - 11th out of 14 of world highest ranking plasma related research labs) citations per paper as a quality measure. (Current position 7th out of 14 of world highest ranking plasma related research labs) We aim to be in the top 3 position in these metrics within the next 5 years.	One of the top 3 world wide placed Research Centres in Plasma Science and Technology.
Development-Funding Officer	Appointment of a dedicated development and funding officer	Higher rate of successful research application and enhanced interaction/ collaborations with Industry
Education /Outreach Officer	Appointment of a dedicated Education and outreach officer	Promote and enhance the current range of education programmes being delivered by the NCPST and to establish a active and vibrant outreach programme
Graduate School	In line with the DCU strategy the NCPST envision the development of a Graduate School in Plasma Science and Technology – discussion have commenced with potential partners both in Ireland and in the UK	World Class Graduate School in Plasma Science and Technology

