HSRC RESEARCH OUTPUTS
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Breaking barriers to higher education-industry research partnerships

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What should research managers and project leaders take into account to facilitate research partnerships with industry in their institutions or research units? What are the most likely constraints on partnership in its myriad forms and how can research managers and leaders break these barriers? An HSRC study attempted to map the forms of partnership that exist across the South African higher education landscape, and to map the institutional policies, structures and conditions that facilitate and constrain. The focus was three cutting edge high technology fields – Biotechnology, New Materials Development and Information and Communication Technology (ICT). This paper draws on the analysis of to provide insights for institutions, research managers and project leaders who wish to pursue partnerships with industry.

The paper cannot present a blueprint or set of instructions, for the study shows that apparent 'success' stories in South Africa are shaped by each institution's context, research culture, structures and capacity. A number of higher education institutions have developed policy, strategies, structures and mechanisms to promote strategic research partnerships with industry, often drawing on the experience and practice in countries such as the United States, Britain and the Scandinavian countries as guiding models. However, the South African context is distinctive, with a differentiated higher education system, with uneven levels of Science and Technology capacity, uneven levels of research capacity, uneven levels of research funding and resources, uneven regional distribution of industry and opportunities for economic development, and a massive demand for social development.

The paper will thus have a very specific focus, and discuss five tensions that emerged in the course of the analysis. Institutions have found different ways to resolve these tensions, in order to facilitate partnership, or have not been able to resolve these tensions, in which case, they act as constraints to the realisation of strategic plans.

The first tension relates to the degree of policy coherence between those operating at different organisational levels within higher education institutions. For instance, an institution may have formally articulated a strategic policy to promote partnership, but this had often not permeated down from research management to faculty or research unit level, or may have been actively resisted by research leaders, meaning that policy largely remains something the institution aspires to. To break this barrier, research managers and project leaders are challenged to articulate and implement workable strategies and mechasnims to ensure that partnerships are integrated within the institution's strategic policy and structures of power.

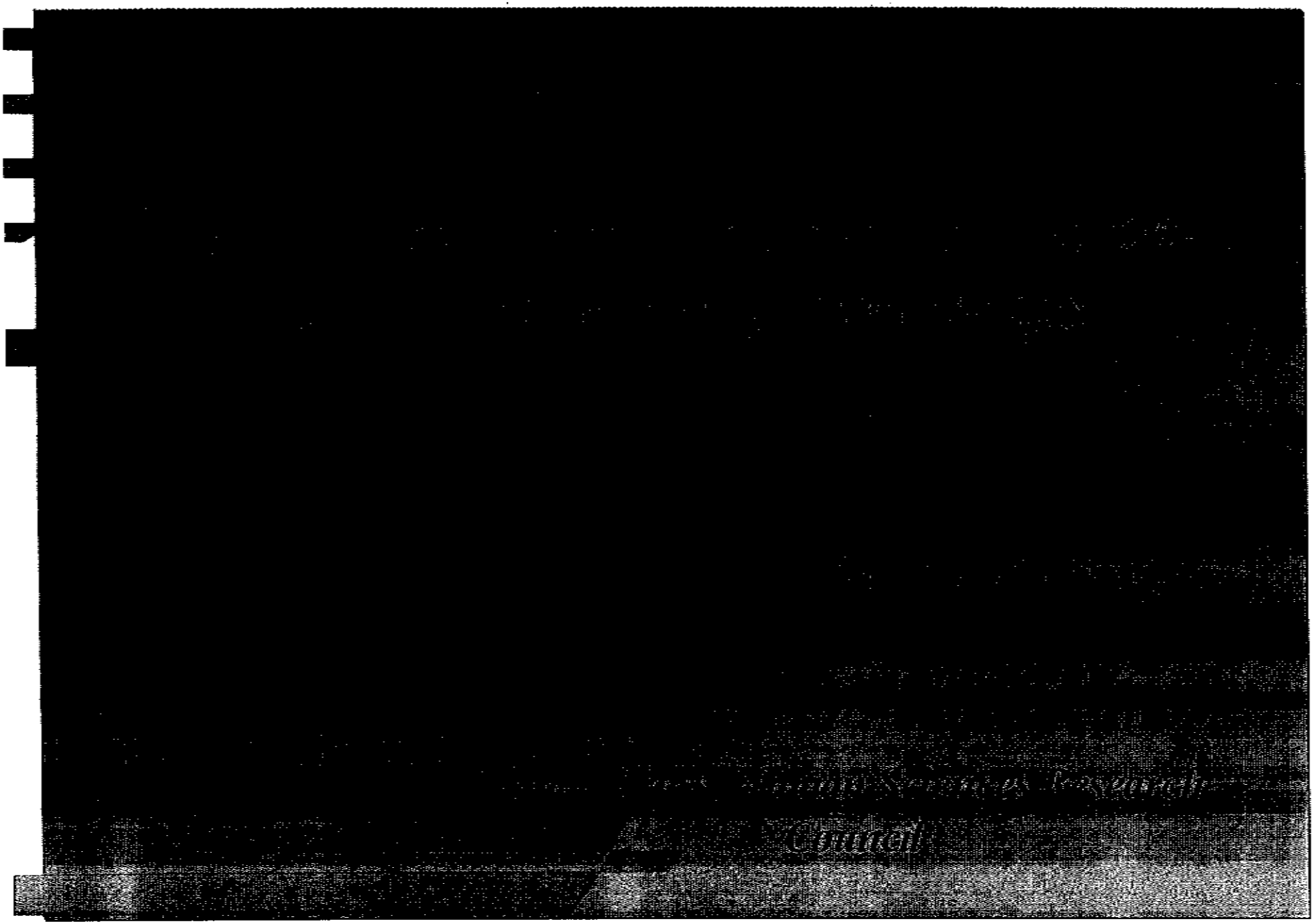
A second very strong tension pulls between the financial imperatives driving academics to seek partnerships with industry, and the traditional intellectual imperatives of academics, expressed in a concern that academic freedom should not be compromised. Breaking this barrier requires a creative balance between the financial and intellectual imperatives, particularly in the intellectual property policy of the institution, that does not constrain publication and dissemination of research results but at the same time, meets the needs of industry.

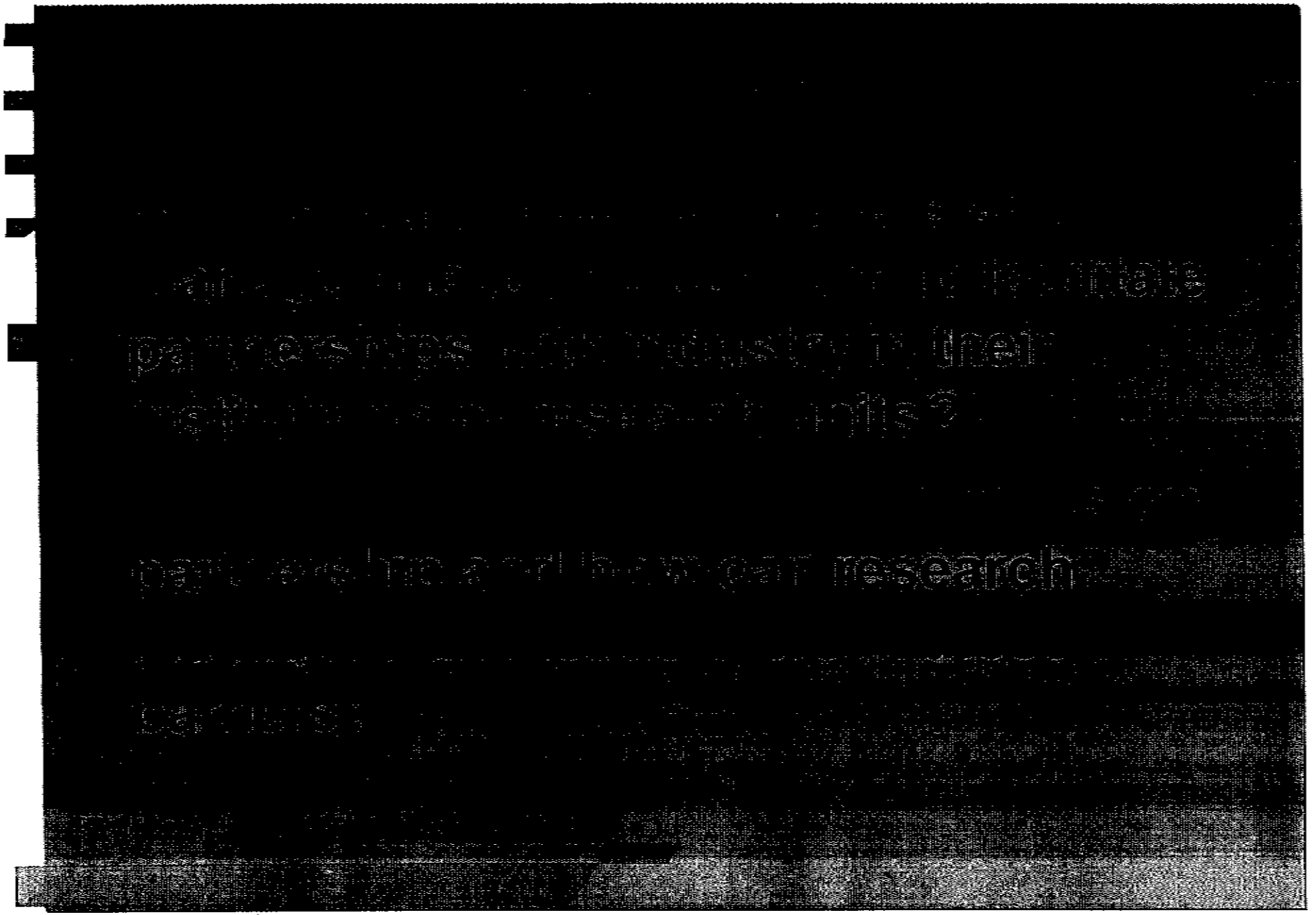
A third tension is between whether institutions should have centralised or decentralised structures to promote and initiate partnerships. Insufficient support and its opposite, too much intervention on the part of an institution, were both seen to potentially constrain individual academics in different institutional contexts. The challenge is to find ways to incentivise and support partnership that do not stifle individual initiative, and at the same time, provide simple and effective support mechanisms, particularly for administration and finance.

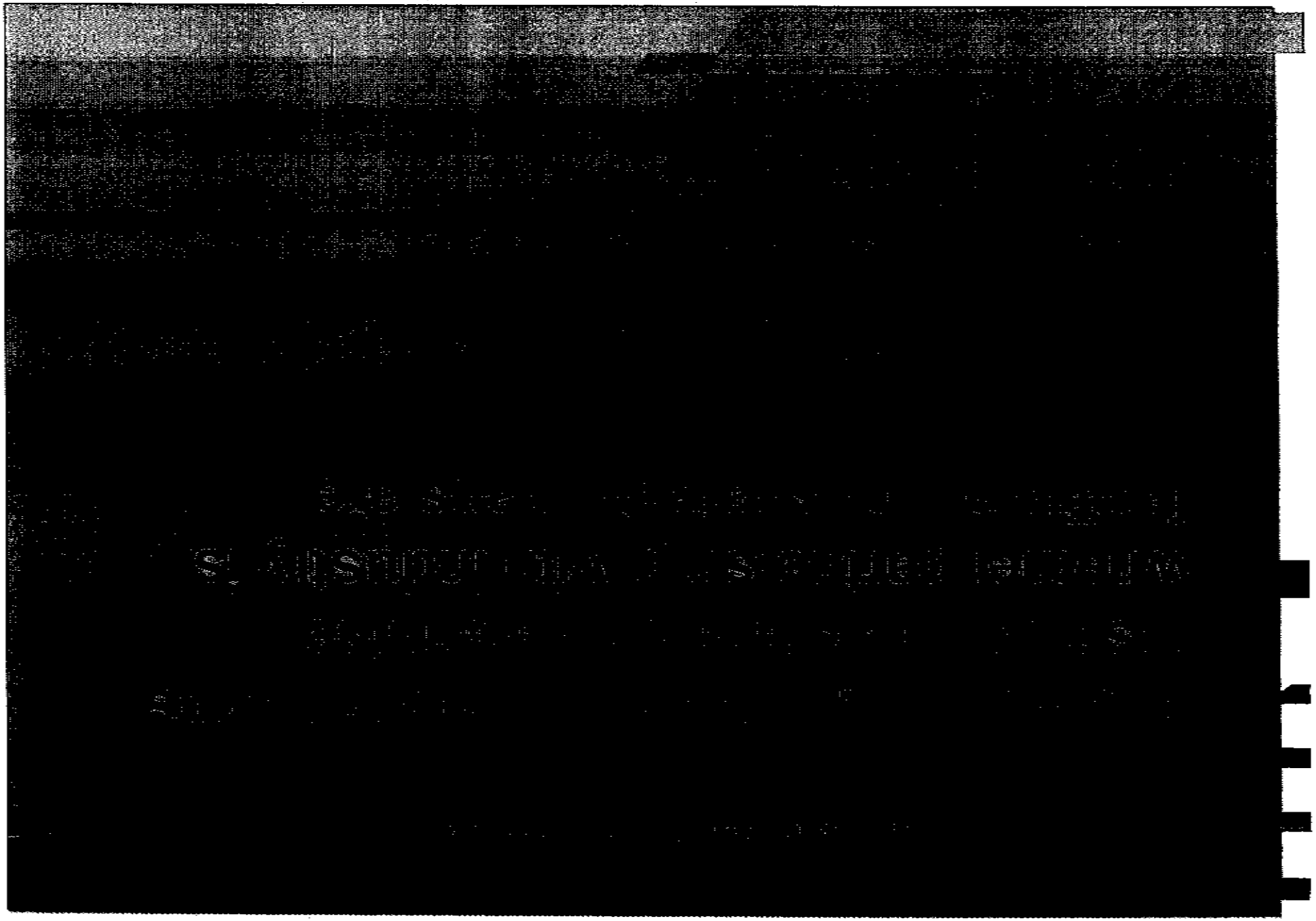
The fourth tension is more complex, and relates to the co-existence in a research unit, faculty or institution of different forms of partnership that each have specific implications that may require trade-offs. The challenge here is to understand the particular pattern of partnership that exists in the institution, in the light of their own mission and goals, and to determine what strategic balance of different forms of partnership would be desirable to foster, given these goals and existing research capacity.

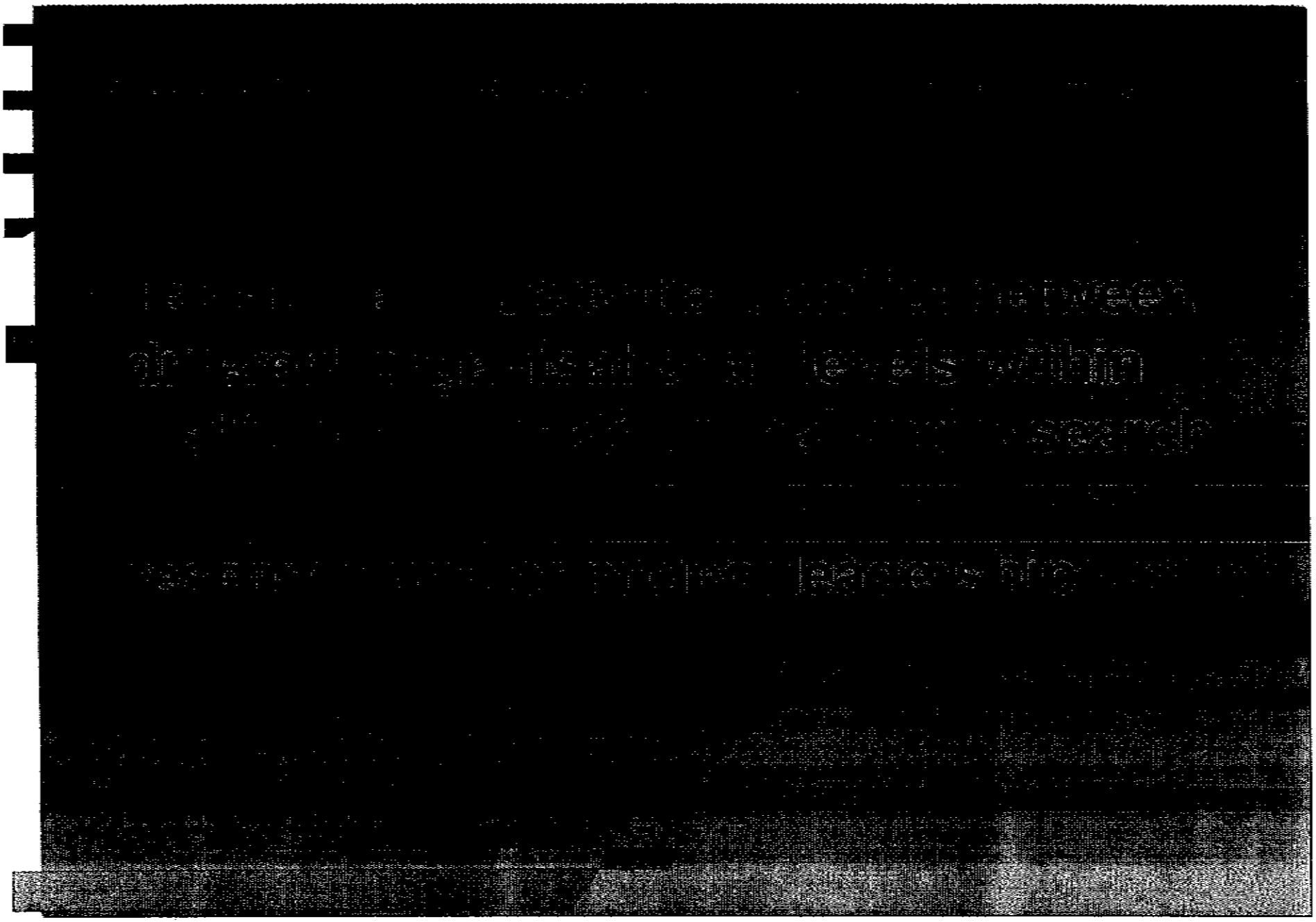
The fifth tension relates to the articulation or disjuncture beween internal and external conditions, such as regional location in relation to industrial distribution, global economic trends, or trends in knowledge and technology fields. Institutions may have creative and unusual schemes, but face external constraints over which they have little control. To break this barrier, research managers are challenged to develop ways to harness the potential of their global and regional location, and to build relationships with industrial sectors related to their niche areas of strength.

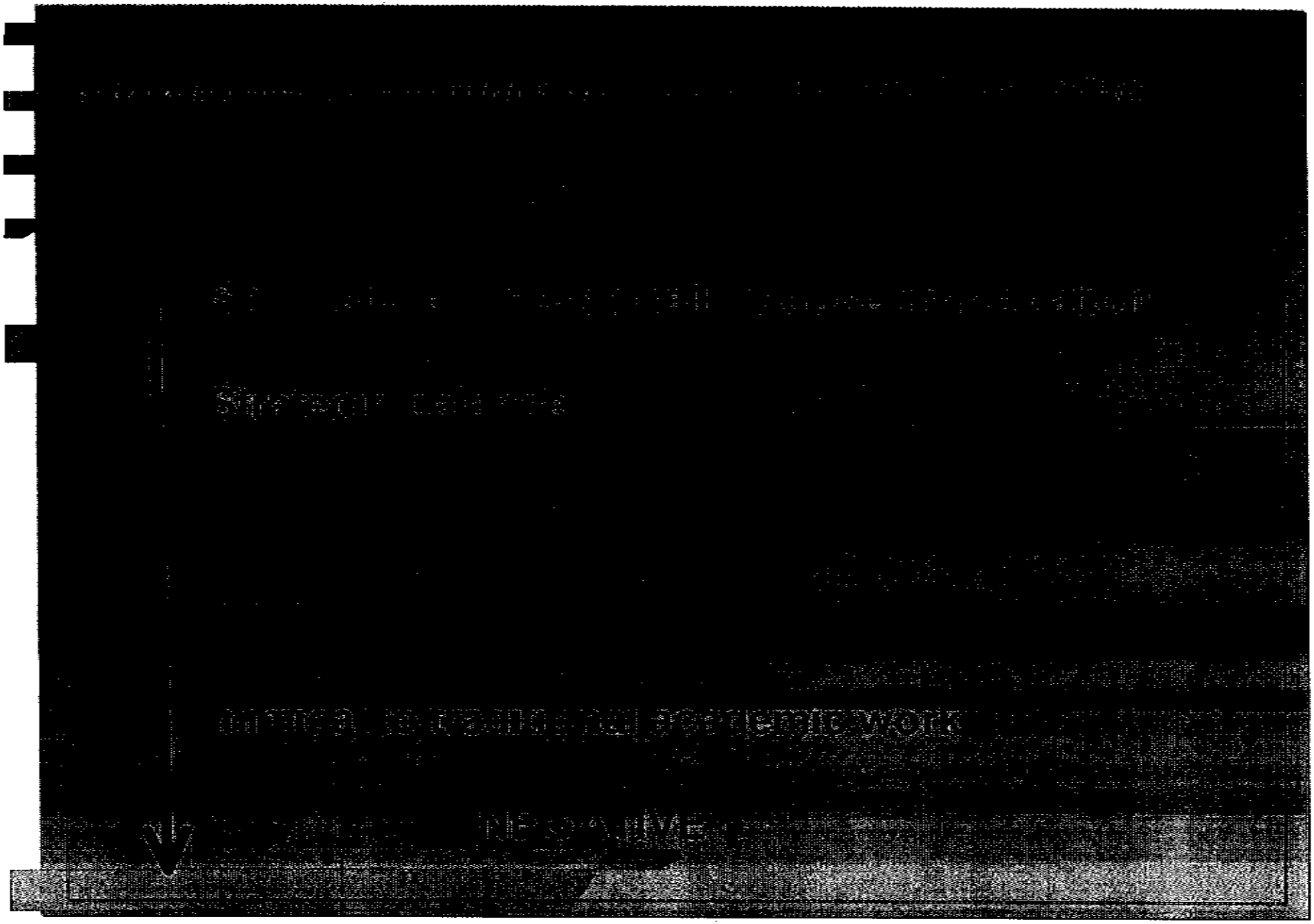
Resolving these tensions creatively to inform the strategic policy, structures and mechanisms of an institution or research unit can go a long way towards facilitating partnerships, but it is evident that instutions alone will not succeed, unless external barriers are addressed. What is also required is greater state incentivisation and greater commitment on the part of industry to contribute to long-term research collaboration in the interests of innovation, regional and national development.

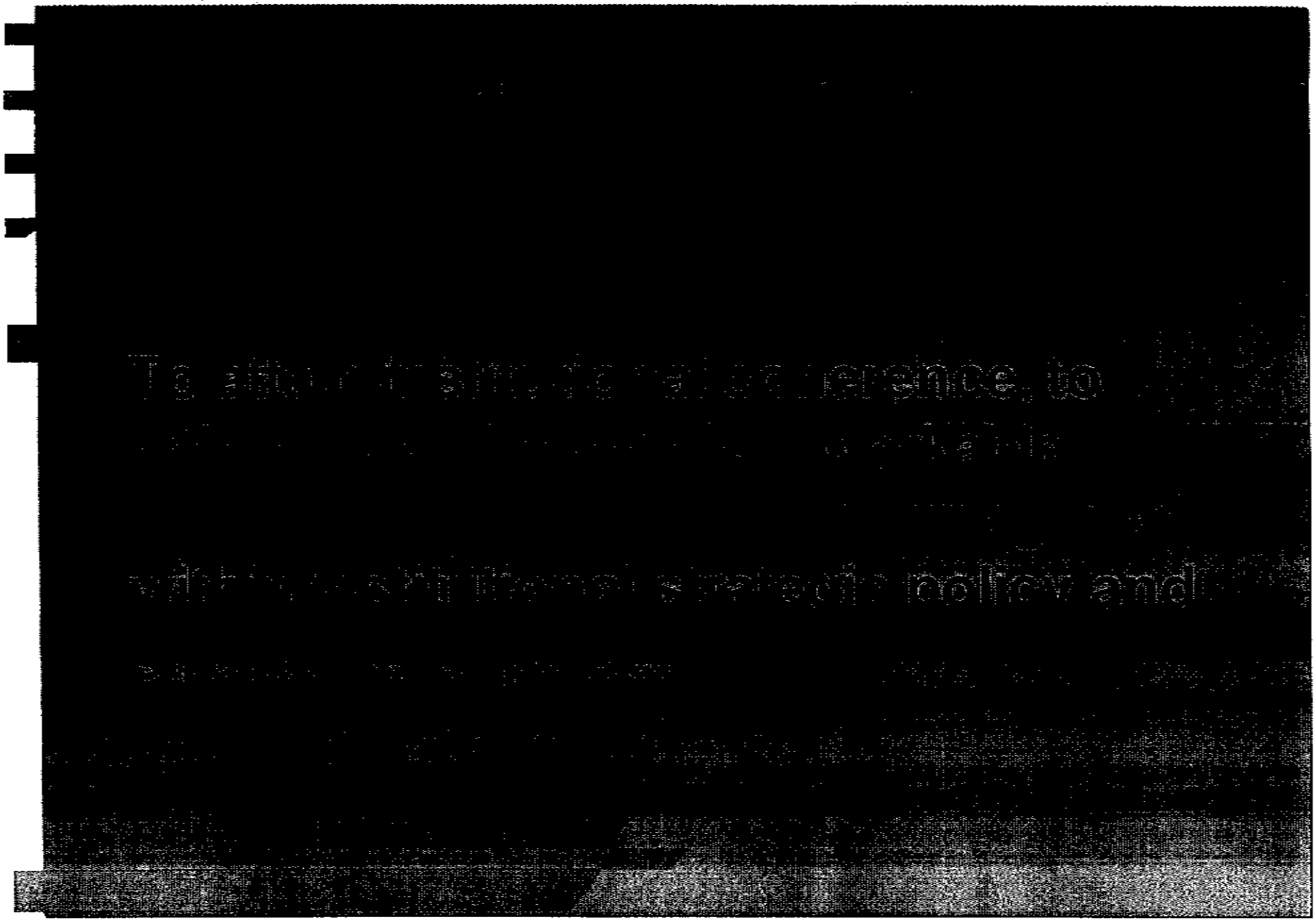












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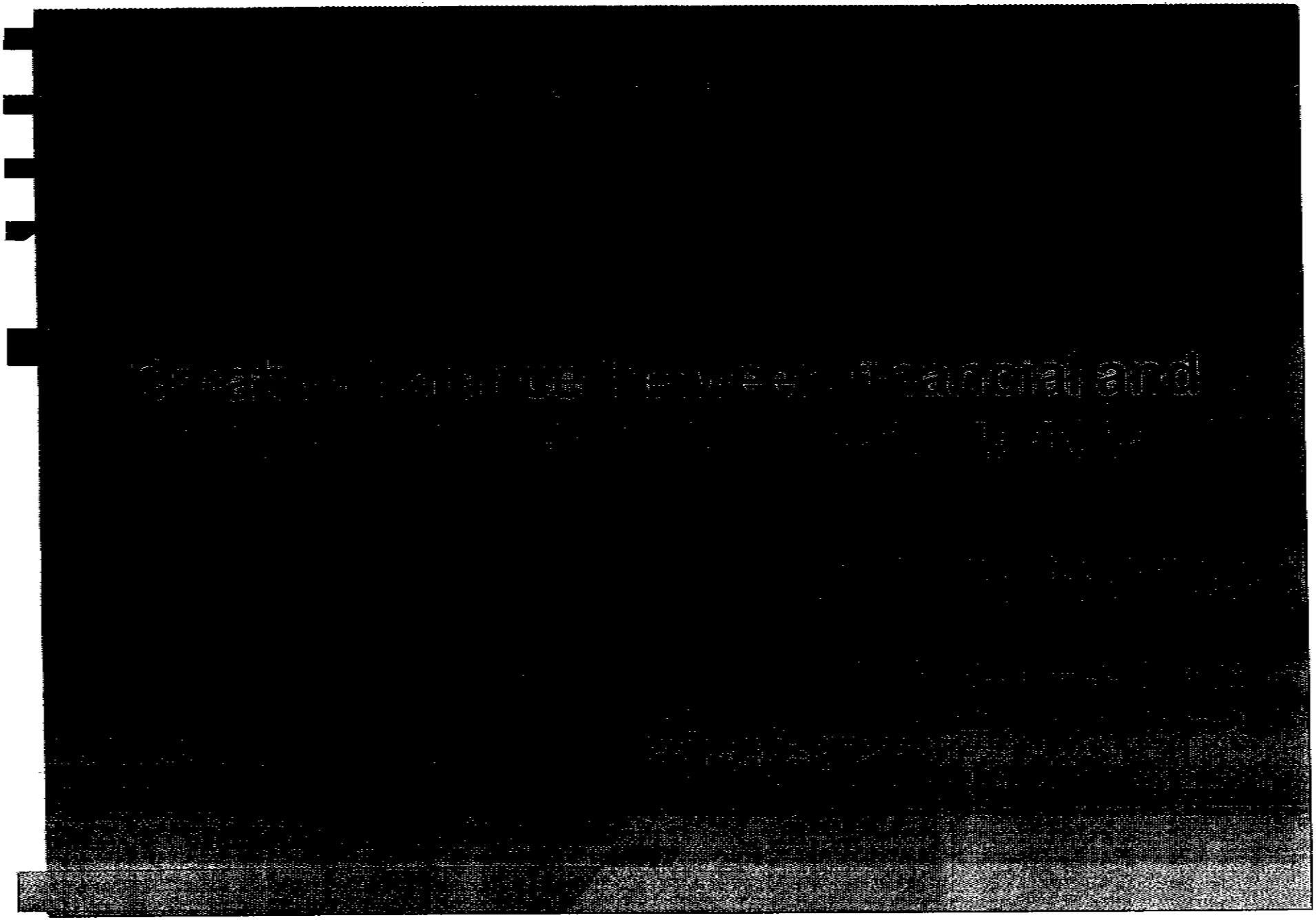
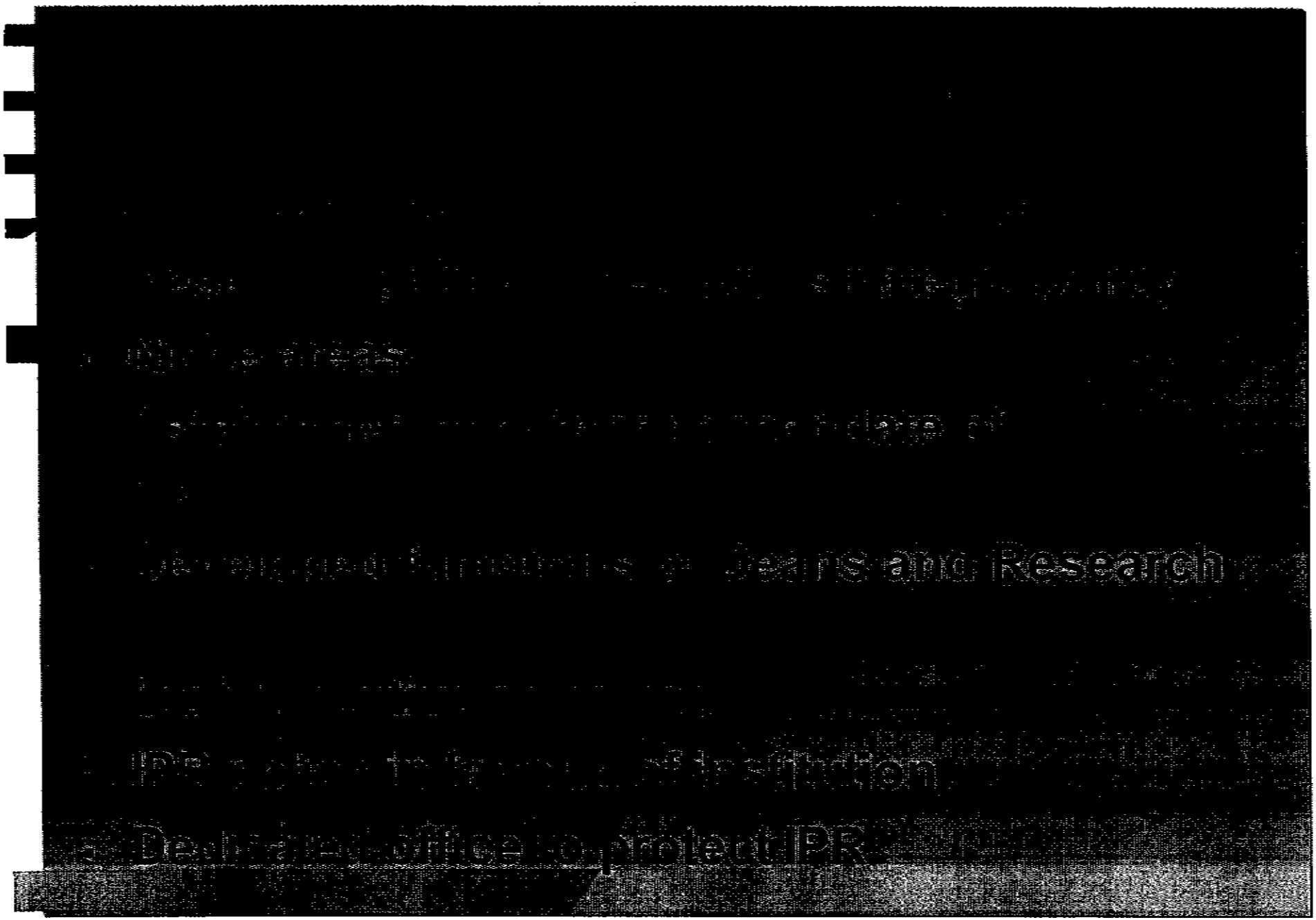
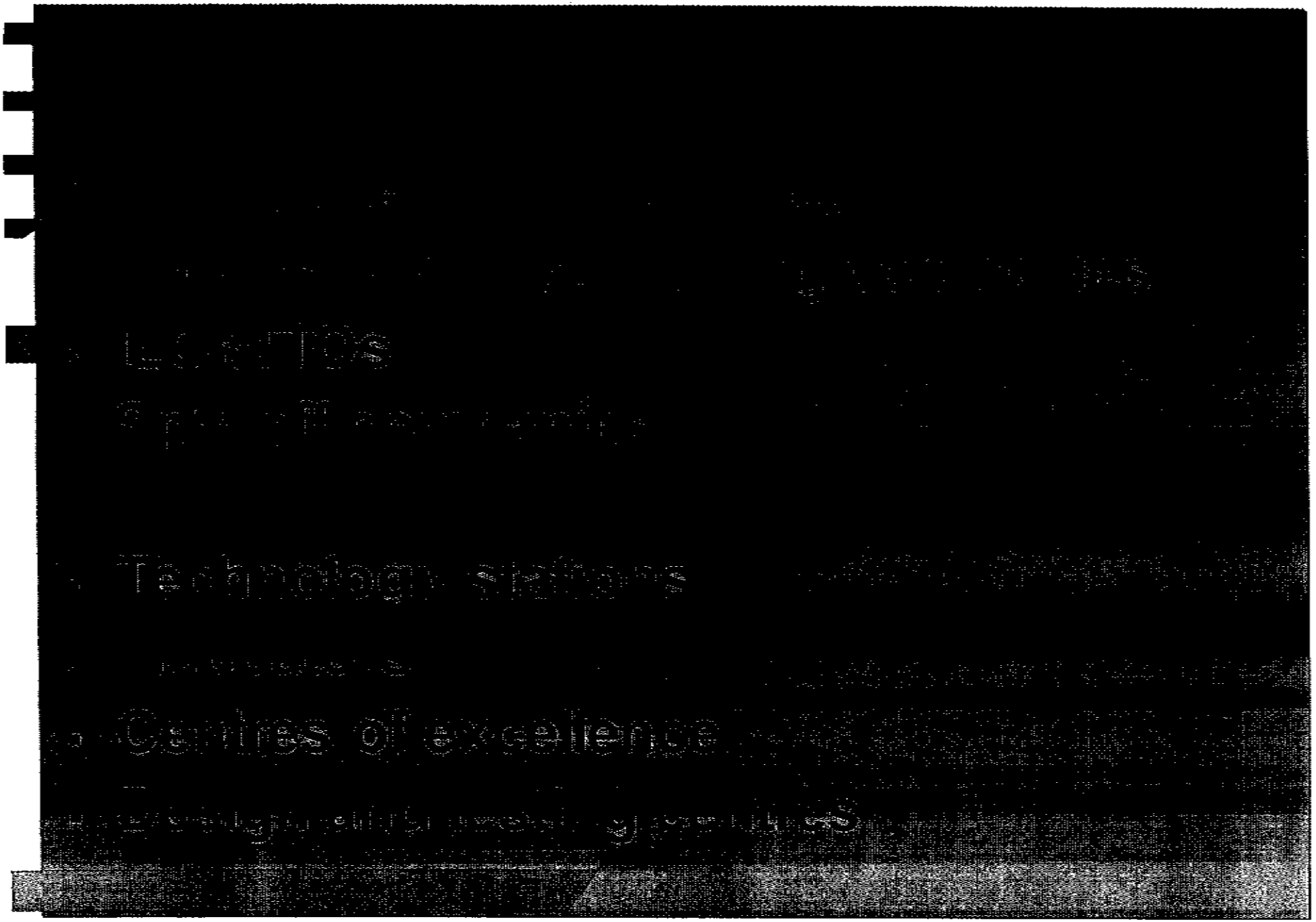
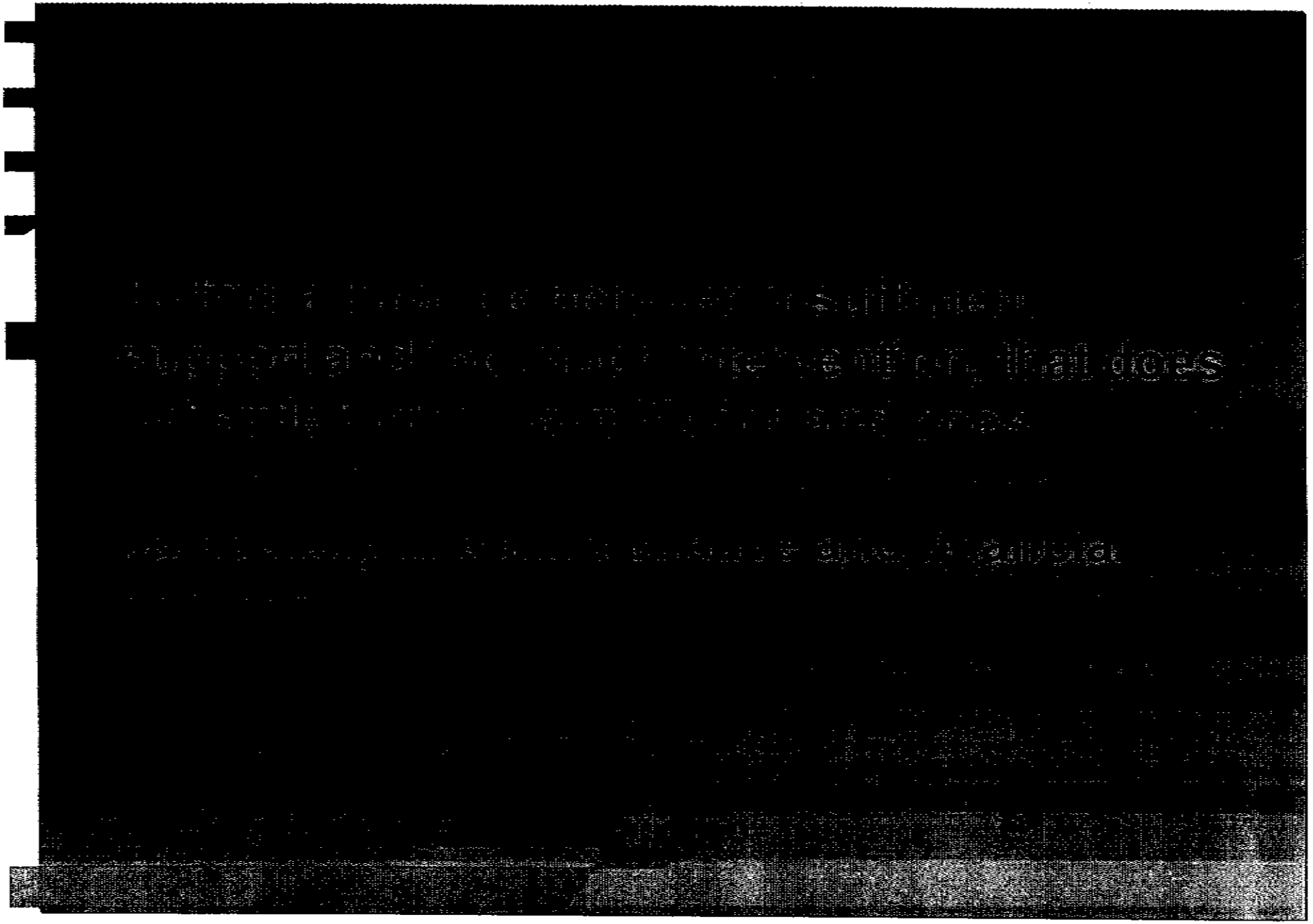
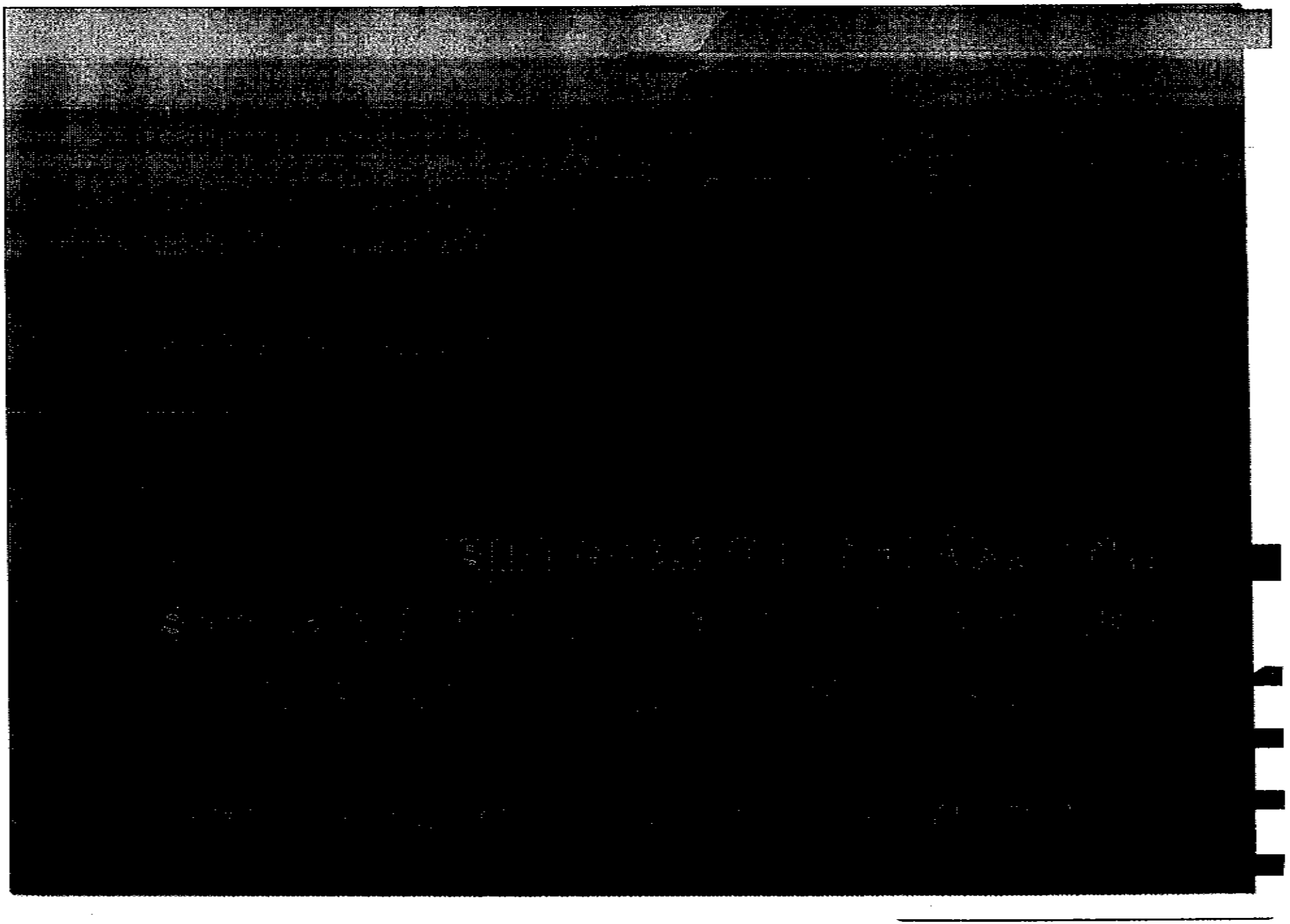
- Knowledge intensive collaboration on fundamental or strategic research without [illegible] (problem identification, publications and theses)

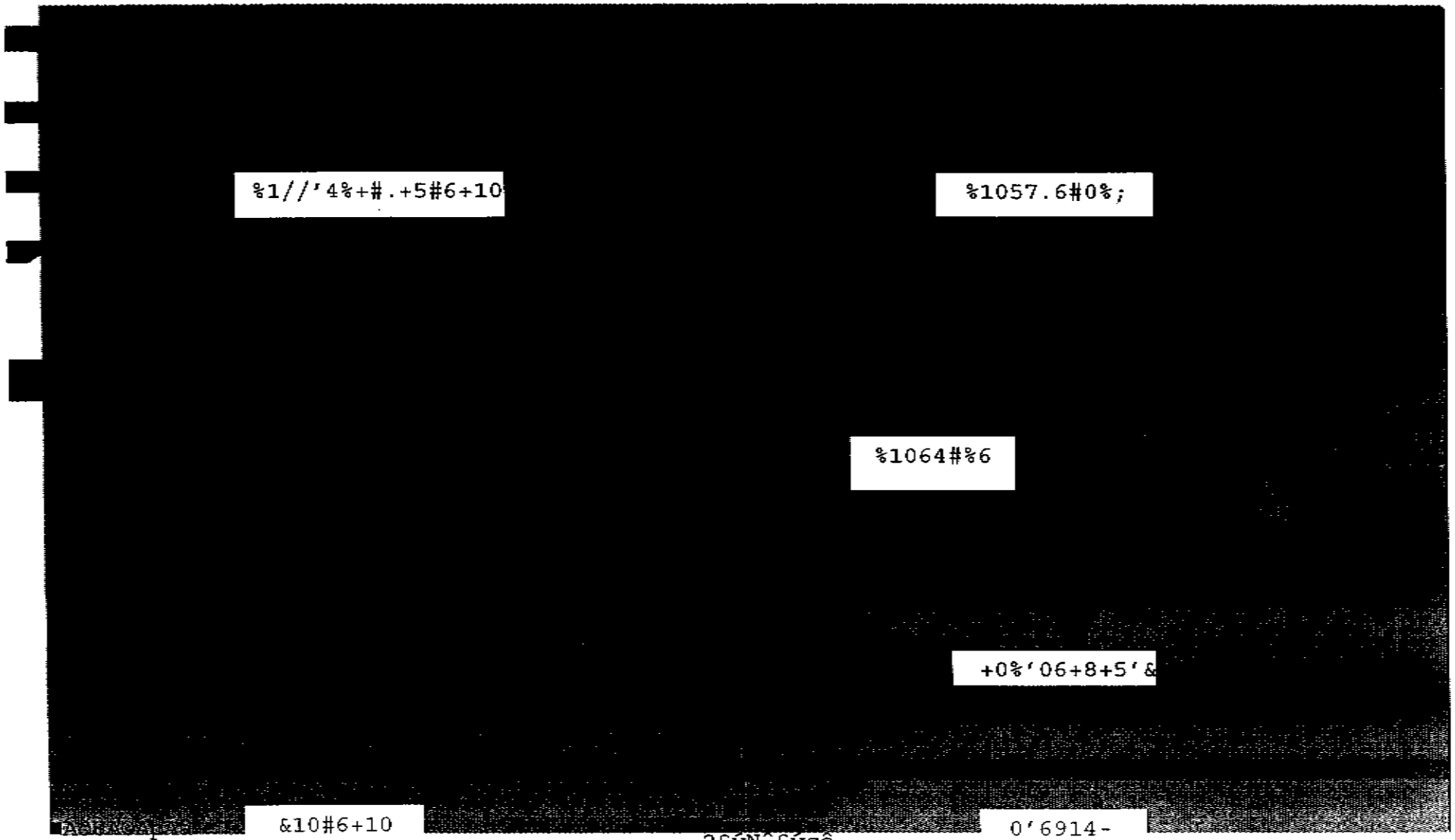





Centres of excellence







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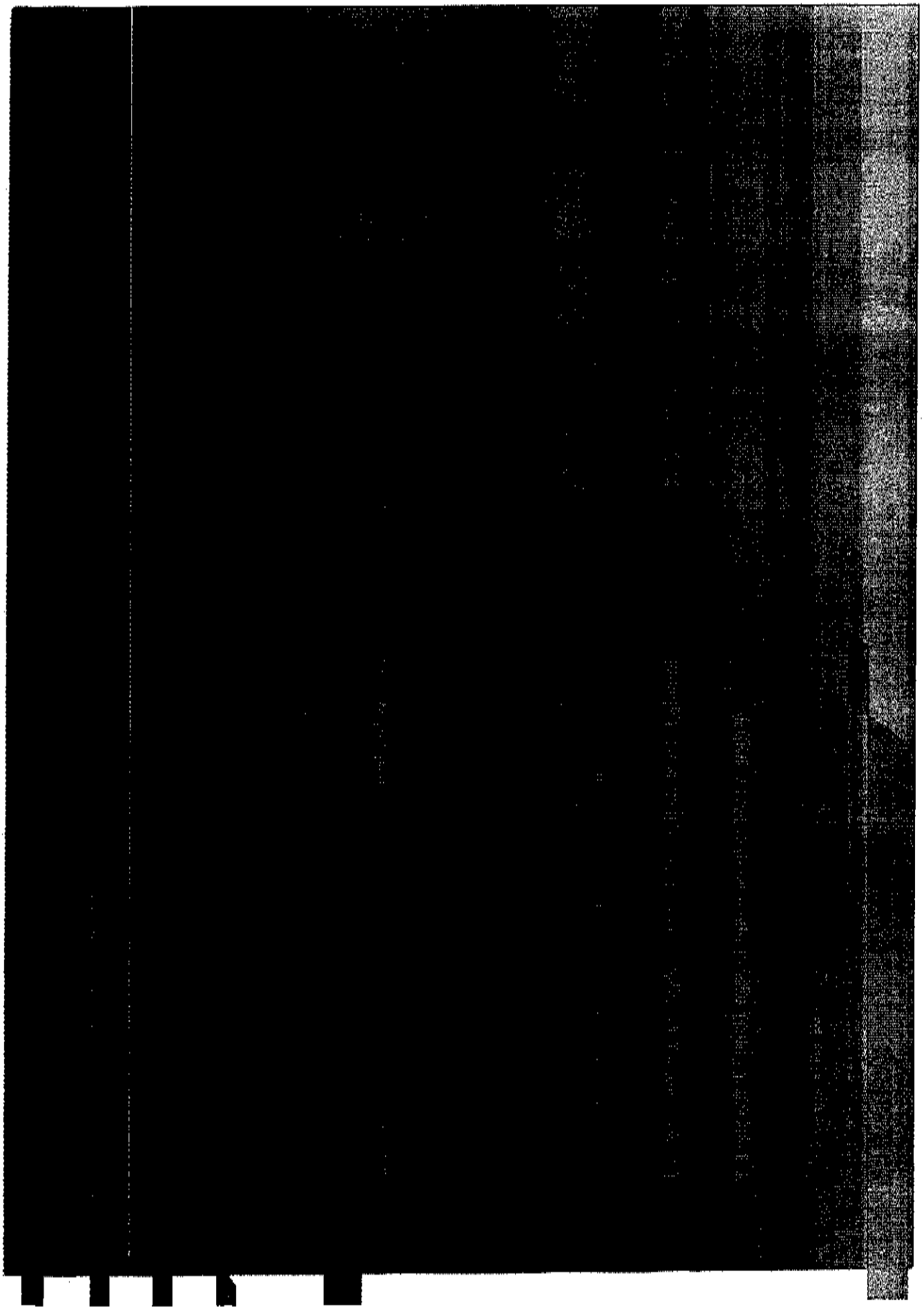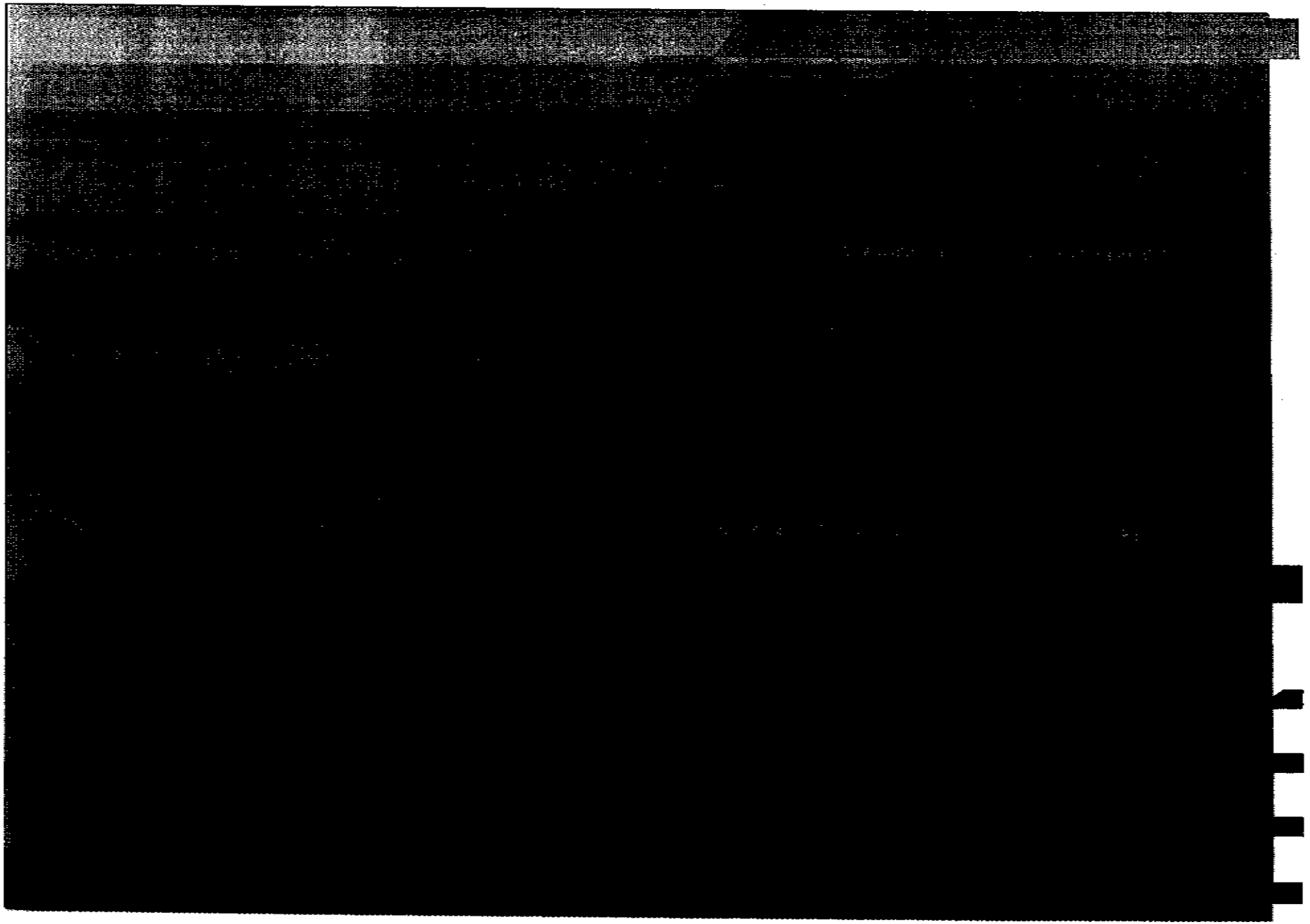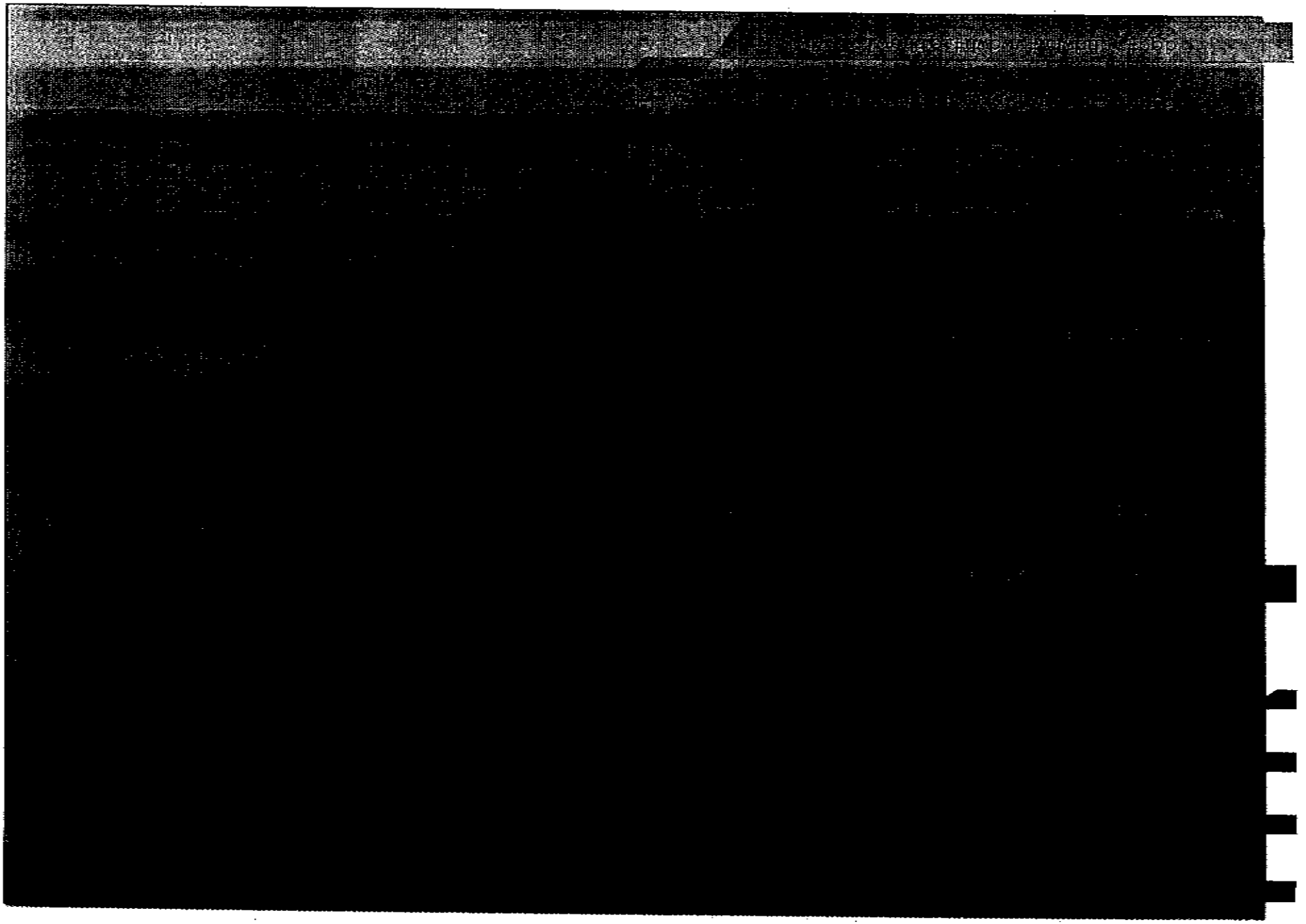
and existing research capacity.