



# A Proposed Management Framework for Commercialisation of Expertise at Public Universities

Wynand C J Grobler  
Frikkie van Niekerk



NORTH-WEST UNIVERSITY  
YUNIBESITI YA BOKONE-BOPHIRIMA  
NOORDWES-UNIVERSITEIT  
VAAL TRIANGLE CAMPUS

# Introduction

- **Commercialisation of academic output at universities has become an economic imperative since the 1990's**
- **Until the mid 1980's commercial activities would have been seen as community service goals rather than being a specific objective in the mission statement as goals**
- **During the 1990's countries such as Australia, US, and UK developed policies to exploit the collaboration between higher education and industry**
- **Conflicting values and expectations of the private and public sector**
- **Need has emerged for the development of a framework for the implementation of expertise and commercialisation at universities so that the academic ethos of the university are not undermined**

# Definition of Commercialisation within a University context

- No precise definition of the meaning of commercialisation within the university context
- “ Process of developing new ideas and/or research output into commercial products or services and putting them on the market ( Zhao:2004)
- “efforts within the university to make a profit from teaching, research and other activities on campus”( Bok:2003)
- “process of a university-industry technology transfer”(Sharma:2006)
- “emergence of spin-out companies and university founded companies”( Leitch & Harrison :2005)
- In this paper :” termed *implementation of expertise* and includes non-commercial activities such as professional advice, community service, subsidised developmental engagement, developmental activities as well as activities for income generation, such as short courses, consultation, contract research, internal corporate ventures, the creation of associated subsidiary companies and IP exploitation

# Changing role of universities

- Traditionally, teaching and research have been the core business of universities as stated in their mission statements
- This has now changed with increased globalisation and reduced state funding
- Zhao( 2004) describe this role change as an academic revolution or academia taking up the role of entrepreneurs
- In the “Triple Helix” model (Etzkowitz and Ledesdorff 1997), it is stated that if universities accept their changing role with regard to commercialisation, the relationship between university, industry and government is seen as a triple helix of evolving networks in which a university has a specific and valuable role to play in terms of innovation.
- It is expected that universities play a more prominent and significant role in the knowledge economy. In a knowledge economy, the university is not only a provider of human capital but also a seedbed of new firms and entrepreneurial activities

# Changing role of universities.....

- **We believe this imperative partially contributed to universities becoming increasingly independent of public funds.**
- **Furthermore, universities embracing the new paradigm have become more relevant and have allowed (and embraced) external stake holders, including the market place, to have a greater influence on their offerings and activities.**
- **Universities are ideally positioned to become partners in the triple helix relationship, which allows for the strengthening of the triple bottom line approach in institutions; that is, a strong focus on financial outcomes, social outcomes, as well as on the environment.**
- **Against this background, it can be argued that universities may experience changing funding structures and changing expectations from society on an external front, which must be synchronised with structures and goal setting on an internal front.**



# Prerequisites for successful commercialisation

- When examining the prerequisites for successful commercialisation at universities, a number of important aspects have been identified.

These include :

- Having a proper structure for facilitating university commercial activities (Amidon Rogers 1988),
- Clear and objective policies and management structures (Fuchsberg 1989),
- Clear decision-making infrastructure to maintain perspective (Chafin 1988),
- Adequately established measures to guard against potential conflicts of interest and measures to guard against legal and financial problems (Atkinson 1985).
- These prerequisites must be incorporated into a management framework for the commercialisation activities at universities.

# Challenges on the road to successful commercialisation

- Differences in cultures between the public and private sectors regarding commercialisation as being major obstacles to creating joint industry/higher education ventures
- Indicates that industry and universities may have different cultural climates and organisational values, and even mission statements that may form barriers to effective commercialisation
- If not well managed, the commercialisation activities at a university may pose a threat to the traditional core business of a university and scholarship
- The delay in the publication of research because of the secret nature of the research
- The implication is that universities increasingly engage in research led by industry, controlled by industry and probably directed by industry.
- In order to manage a university strategically, it is important to consider the potential threats that commercialisation poses to a university so that these may be embedded in strategy formulation.

# Critical success factors for managing commercialisation

These include:

- The development of a sound business plan,
- Clear indication of intellectual property ownership,
- The isolation of any business incubator from the daily activities at the university, acceptable incentive schemes for staff involved,
- Independent financial auditing and the establishment of clear commercialisation outcomes and direction, including legal and financial aspects.
- Decisive decision making by management, university-wide management of commercial assets and sound governance within the university.



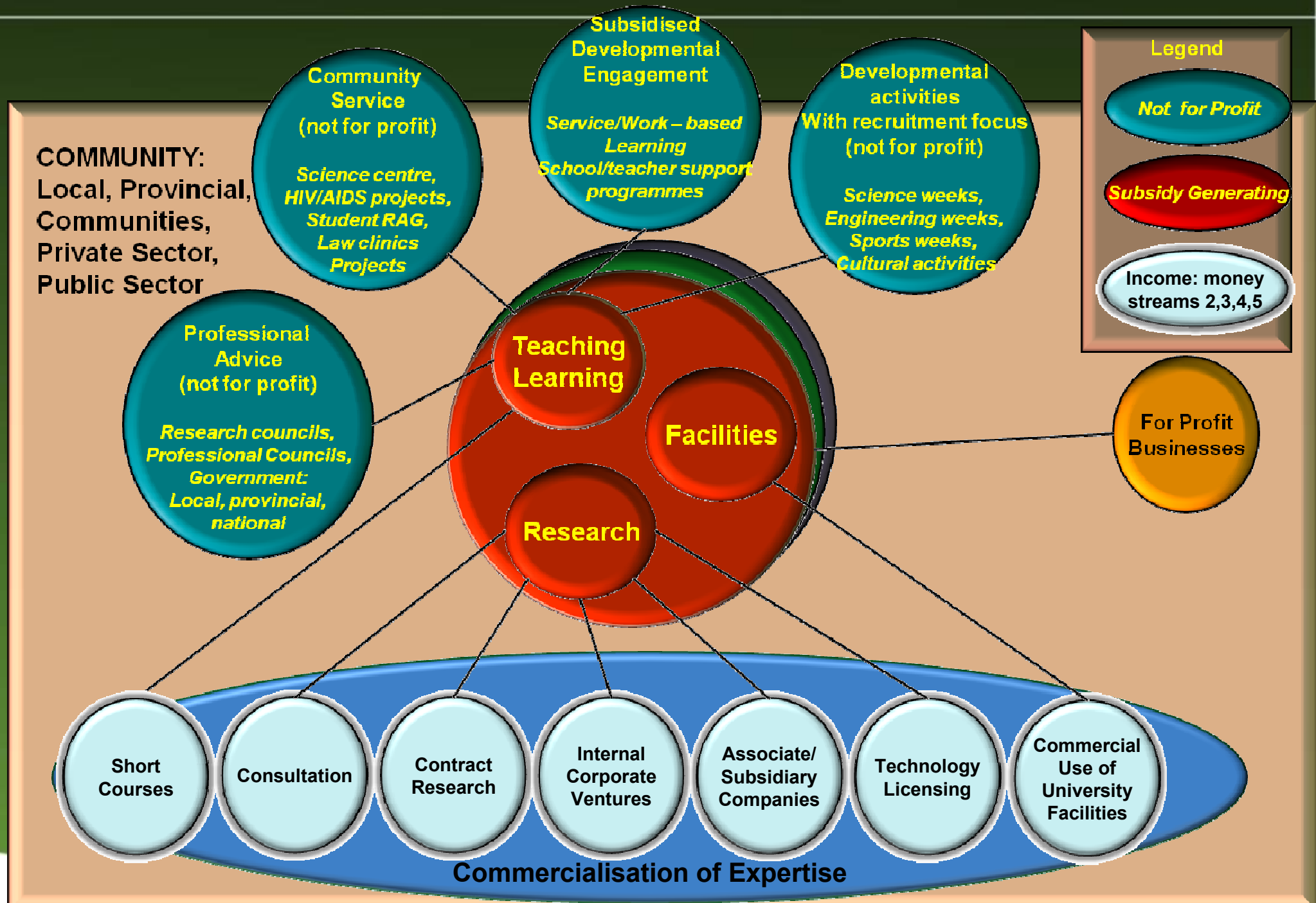
# Prerequisites for a sound management framework

- **Given the traditional role of universities and the associated entrenched value systems, processes and policies, it is important to develop an appropriate management framework and support systems, should a university embark on a trajectory of developing into a more entrepreneurial and enterprising organisation.**
- **For a university to be effective in its commercialisation efforts, these activities need to be managed in such a manner that they are aligned with and strengthen the university's traditional core functions and scholarship.**
- **A University needs to position itself in such a way that its core business is strengthened, its scientific and financial sustainability guaranteed and its reputation amongst all its stakeholders reinforced**
- **In extending its activities, within its mandate, beyond the traditional core business, a university should incorporate a number of important prerequisites into developing these commercial activities, including the alignment of commercialisation with its mission and vision.**

# Prerequisites for a sound management framework.....

- **A lack of alignment with the university's vision and mission may lead to vision drift, a loss of reputation and the ultimate demise of the organisation. The mission statement should then culminate into well-defined goals for commercialisation**
- **It is proposed that the University's interests are protected by appointing suitably qualified internal and external directors to represent its interests on the boards of companies in which the university has shares, according to the relevant shareholders' agreements.**
- **Aligning its investments and commercial activities with the needs of its customer base allows the university to optimise investments, serve its customer base and avoid unfair competition with the private sector.**
- **Besides its own academic and general quality requirements, the university has to adopt appropriate quality systems and practices for its activities related to the implementation of expertise.**

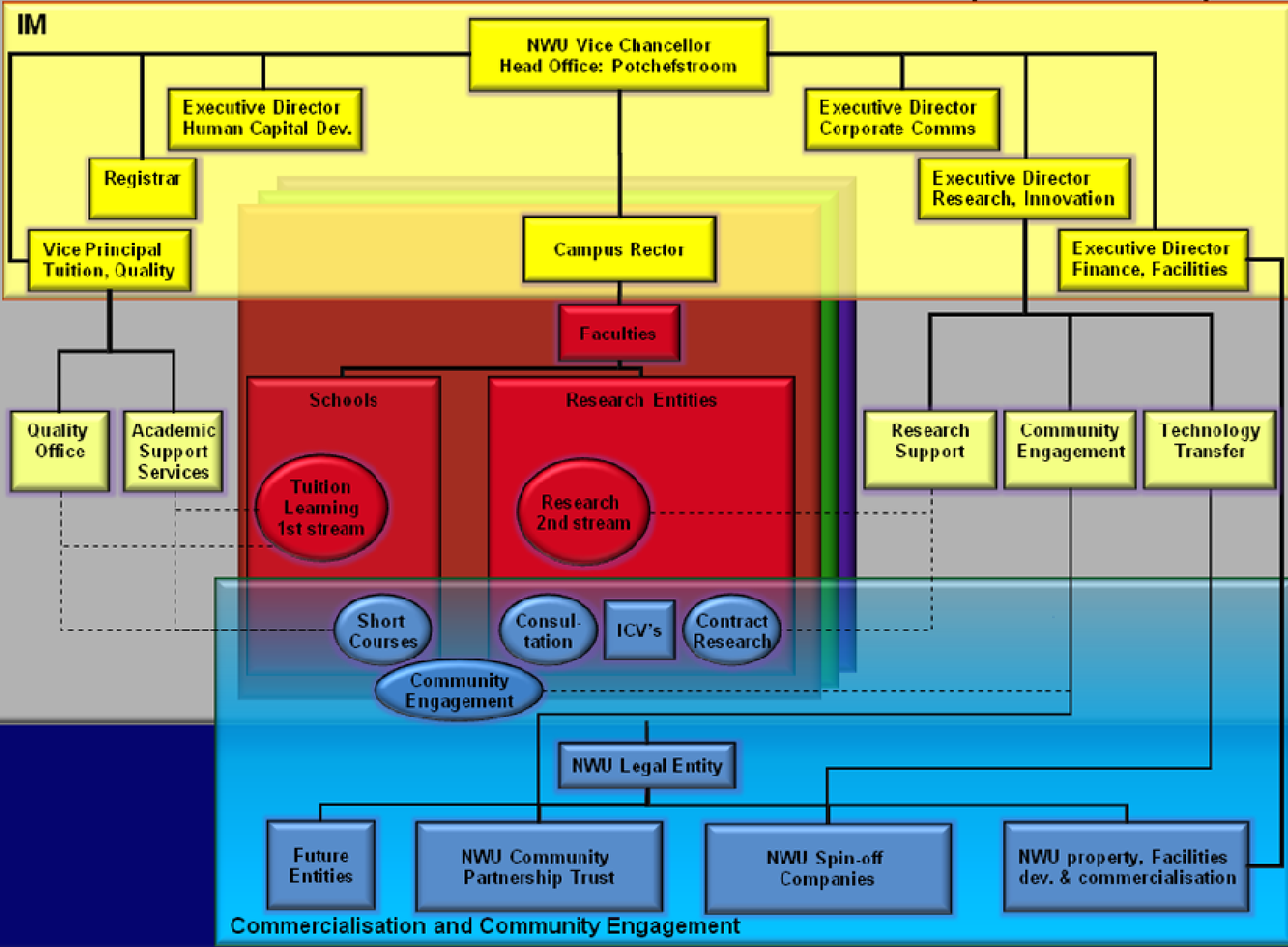
# Model: Implementation of expertise



# Corporate structuring and Management structuring

- ***Corporate structuring*** is a practice whereby enterprises with different risk profiles are encapsulated into separate legal entities (usually being private companies of the relevant jurisdictions) to protect the various enterprises from the commercial risks not inherent to them. It is based on and utilises the principle of limited liability of shareholders. It also provides for appropriate governance and management of these entities.
- ***Management structuring*** takes corporate structuring one step further by relinquishing the management control to which a shareholder may be entitled to in an independent organisation. Corporate structuring aims to protect the shareholder against exposure to the commercial risks of its subsidiary's activities and attempts to limit abuse of such buffering.

# NWU ORGANISATIONAL STRUCTURE: Implementation of Expertise







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