

# GREEN CAMPUS INITIATIVES AS PROJECTS: CAN CREATING CONDUCTIVE INTERNAL UNIVERSITY PROJECT ENVIRONMENT A KEY TO SUCCESS?

Pantaleo M. D. Rwelamila and Neha Purushottam<sup>1</sup>

*University of South Africa, Johannesburg, South Africa*

Green campus initiatives are becoming integral part of modern day's university systems. However, their management remains slow, cumbersome and limited scope process. Review of related literature suggests that the effective and efficient management of these initiatives require incorporation of project management (PM) principles and thus the need to establish a framework to manage green campus initiatives as projects. Hence the existence of sub-processes like initiation, continuous coordination, control and ending of green projects. These green campus initiatives (projects) should be part of university strategic management system. In the light of this background, an attempt is made in this paper to describe how to apply project management framework within the University system. The central argument in this paper is about Universities moving away from traditional approaches in embracing green initiatives to establishing a formal process where a sequence of tasks is developed with clear defined objectives and a defined start and end event. It is further argued that the success of any green campus project depends on performing PM professionally. The paper provides an initial framework for implementation of green campus project in contemporary higher education institutions.

Keywords: Green Campus initiatives (GCI), university strategy and environment, sustainability, managing by projects.

## INTRODUCTION

Impacts of climate change are increasing and so is the seriousness of the green initiatives. Universities are contributing in the process of environmental sustainability through knowledge creation, green campuses and by advising communities. However, many green campus initiatives either do not reach their full potential or remain challenged by their inefficiencies. A closer look at the literature suggests that besides financial, organizational, process related barriers, major issues like misunderstanding of university culture, lack of flexibility, dynamism, openness and absence of adaptive process are influencing pace of green campus initiatives. Review also indicates that there is a need for an effective and efficient green campus management system and establish a need to look at these initiatives as projects and to create a conducive environment for green campus projects.

This paper is a conceptual paper which is developed with an objective to look at green campus initiative (GCI) management from the perspective of project management philosophies. The aim of this paper is to bring attention of university management towards the utility of project management in addressing challenges faced by

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<sup>1</sup> purusn@unisa.ac.za

universities in embracing sustainable green campus initiatives. In the light of these objectives and aims, this paper argues that (a) green campus initiative (GCI) should be seen as a programme with a plethora of projects and (b) Universities should attempt to create a conducive internal environment to ensure success of GC projects. This paper strongly argues that management of green campus initiatives projects should be part of university strategic portfolio.

The first section starts with an introduction of green campus initiatives in the higher education environment. The second section examines the literature on the barriers to green buildings and green campus in higher education institutions. The third section identifies the green campus initiatives at the universities display characteristics of a project and attempts to explore the way GCI can be envisioned at higher education level. Fourth section covers the application of the framework through adopting project management approaches and tools in building conducive university environment for green campus projects. The final section concludes by discussing step by step process to create conducive environment for green campus initiatives (projects).

## **GREEN CAMPUSES: A GROWING TREND**

In the light of growing complexity in environment, society and technology, the issues of climate change and environmental sustainability has gained attention of various social and business institutions (Filho 2000; Stephens, Hernandez, Roman, Graham and Scholz 2008). This trend has posed new demands for contribution from the higher education institutions as universities are considered critical in leading radical change and development (Bloom, Canning and Chan 2005). Universities have started integrating environmental sustainability initiatives in education, research, university operation and administration (Jabbour 2010). Green campus initiatives include management of green buildings, energy, water, food, transportation, purchasing, waste and sustainable landscaping (Calder and Dautremont-Smith 2009). Realization of universities' contribution in degradation of environment through their operations has resulted in the emergence of green campus initiatives (Jain and Pant 2010). The investment in building green campuses was identified most promising due to its highest and the most long lasting impact (Richardson and Lynes 2007).

## **GREEN CAMPUSES AND ITS CHALLENGES**

Literature indicates that the universities have attempted to create green campuses by incorporating environment management system in the university settings. However, these changes remain away from reaching their full potential of systemic transformation (Sharp, 2002). The progress of universities in becoming green is influenced by various challenges and barriers and addressing them will facilitate the pace of progress (Owens and Halfacre-Hitchcock 2006).

Various researchers (Dahle and Neumayer 2001; Richardson and Lynes 2007; Clarke and Kouri 2009; UNIDO 2011) identified several factors which broadly related to physical, environmental (business), financial, informational, attitudinal, managerial and organizational categories. However, due to space limitations, it is not possible to discuss it in detail. Researchers like Sharp (2002) believe that if green campus initiatives are developed with an understanding of true university culture, flexibility, dynamism and openness and implemented through an adaptive process, they will be more successful than the initiatives inheriting the rigidity of university structure.

If we summarize the reviewed literature on barriers so far, it emerges that there is a need of a green campus management system which can manage complexity,

dynamism, change and diverse stakeholders. It is interesting to note that project is defined as transitory and dynamic organization (Shenhar, 2001). Moreover, the ability of project management in handling dynamic environment, transitory activities, and in collaborating with the multiple stakeholders is beyond any doubt (Yiu 2008).

## **GREEN CAMPUS INITIATIVES AS PROJECTS**

Universities are project based organisations (PBO) and they have been like that from time immemorial. It could be argued that projects and portfolios of programmes ranging from training to research in universities normally have clear starts and clear ends, they consume resources and they are unique which fully qualify them as temporary social coalitions (Dinsmore 1999). These projects and programmes remain central to the university business and are part and parcel of university goals and objectives. Hence conceptualizing, planning and implementing green campus initiatives (GCI) as projects and portfolios of programmes should be a natural fit to universities. The starting point for universities to implement green initiatives successfully is to start thinking differently. In order to address the above challenges and to sustain the green movement impetus, universities need to avoid random processes which characterized early green initiatives (Sharp 2002), to give green campus initiatives strategic emphasis and to manage these initiatives parallel with typical university core businesses of training and research.

Using Morris and Jamieson's (1997) conceptual model on corporate strategy, it could be strongly argued that any university strategy is a means to realize its goals and objectives. This strategy, according to Morris and Jamieson (1997) is then typically operationalized at a university strategic business unit (SBU) level (colleges or faculties, schools and departments). Expansion of this approach helps to understand traditional strategic initiatives which are often clustered into disciplines - for certificates, diplomas, degrees (knowledge-base-offerings) and respective research deliverables as portfolios of programmes and projects for implementation. Green campus initiatives need to be formally embraced by university authorities at university strategic business unit (SBU) level parallel with knowledge-base-offerings and research as projects and portfolios of programmes. If green campus initiatives become part and parcel of university goals and objectives - as part of university strategy, then it can reflect into programme or project level implementation (where you will have knowledge-base-offerings, research and green campus initiatives all at parallel level). In practice within the university, projects and programmes (which will include campus green initiatives) will be tools for university strategy to be implemented and it is important to understand its implementation.

Looking at university strategic management through Johnson and Scholes's (1997) lenses, it could be argued that university strategic management is fundamental, wide spread with long term implications but also ambiguous and complex. Normally strategic planning process is organized but it also has dynamic elements (Morris and Jamieson 1997). Application of "*emergent*" view of strategy (Mintzberg and Waters 1984) allows consistent appraisal of outcomes and addressing of emerging challenges and thus ensures flexibility and informality. It can also be argued by taking a leaf from Grabher's (2002) work that the interaction between green campus projects or programmes and the university's strategy may be both "*deliberate*" and "*emergent*" depending on various phases of planning and implementation. However, Morris and Jamieson (1997) argued that the role of project management in implementation is ambiguous, though Office of Government Commerce (OGC) (2003) strongly

supported a growing view (at least in the United Kingdom) that 'change' projects (like campus green initiatives) are really managed best by programme management than by project management (Bartlett 1998; Partington, Pellegrinelli and Young 2005).

The fact that universities are Project Based Organisations (PBOs) by virtue of managing strategic initiatives which are often clustered into disciplines - for certificates, diplomas, degrees (as knowledge-base-offerings) and respective research deliverables leads the authors to believe that structuring green campus initiatives into project will be a direct fit to what a typical university is competent to manage. It is therefore assumed that by conceptualizing green campus projects, by understanding university management model and the position of green campus programme and projects, one will be able to see how they fit together.

It should be emphasized, according to Morris and Jamieson (1997) discussed involvement of senior management w.r.t. issues related to control over expenditure and action. Researchers (McElroy 1996; Broner, Ruckert, and Walker 2002) emphasized the role of senior management in ensuring success of project management in strategy implementation. The role of senior management becomes important considering current good governance practices which require formal alignment between business, portfolio, programme and project plans, and transparent reporting of status and risks to the Board and in this case the University Council [Association for Project Management (APM) 2004].

Managing green campus programmes and projects parallel with other traditional programmes and projects will become a norm within the university and through university policy this combination will be formalized allowing academics and non-academic staff members to get fully involved in implementation processes. Artto and Dietrich (2004) outlined many approaches to manage the strategic portfolio-project linkage in multiple project environments. Similarly, Grundy (1998) also suggested ways (like scenario planning, force-field analysis, stakeholder analysis, and "attractiveness/implementation difficulty" analysis) to integrate portfolios, programmes and projects with corporate strategy. Therefore, it is expected that the decision to implement green campus initiatives as projects and portfolios of programmes will, in fact, motivate universities to develop formal approaches for creating and managing strategy via campus green portfolios, programmes, and projects aligned with university business strategy. Hence Morris and Jamieson's (1997) model to integrate university business strategy with green campus portfolios will be followed as indicated in Figure 1.

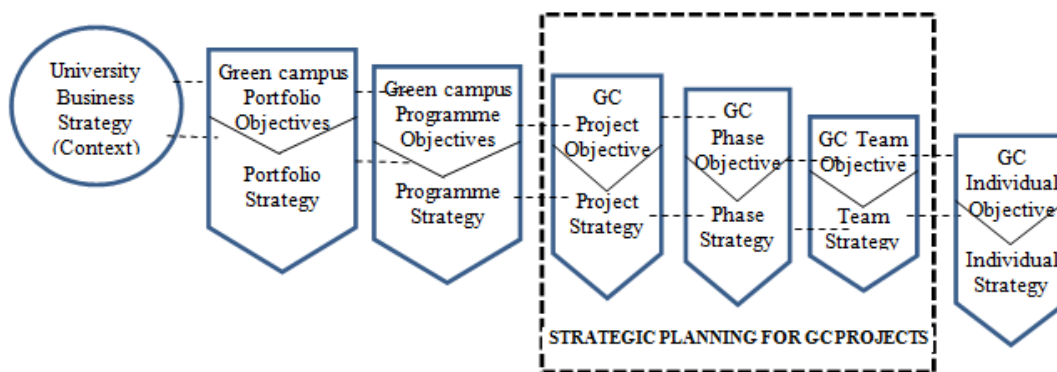


Figure 1: Linking university corporate and green campus project strategy (Source: Adapted from Morris and Jamieson 1997)

### **Green campus portfolios, programmes and projects**

Adopting Turner and Simister's (2000) argument, the majority of green campus projects will take place as part of a portfolio of several green campus projects or programmes. A green campus project portfolio will be a set of projects which perform better if managed in a coordinated way (Platje, Seidel, and Wadman 1994; Artto, Martinsuo, and Aalto 2001). Using Cooke-Davies (2002, 2004) lenses on portfolio management, it could be strongly argued that "*choosing the right project*" will be mainly covered under green campus project portfolio management, while green campus project management will focus on "*doing the project right*".

### **Green campus programmes**

Thiry (2004) argued that programme management is used to coordinate projects which have mutual aim and is the most suitable in evolving scenarios. Hence, both green campus portfolio management and programme management will thus focus on prioritizing resources and optimizing the outcomes and green campus programme management will remain focused on daily implementation management than green campus portfolio management, which will be more periodic in nature (Bartlett, 1998; Partington, 2004; Reiss, 1996). Furthermore, it will be possible within a university setting to implement strategy through green campus programme management and involve continuous re-formulation and adjustment.

It is important to note that green campus programmes will often be long-term and as a result may encounter uncertainty and ambiguity (Thiry 2004).

### **Green campus projects**

Green campus projects, will have an individual and specific objective and follow a "*single development life cycle.*" Application of Turner's (1999) work suggests clear and detailed defining of project (say recycling project), its plan and its alignment with project strategy.

Using Morris and Jamieson's (1997) findings in their case studies as a basis in predicting possible developments in green campus projects, it will be expected that universities will need project strategy which can manage the green campus project through its entire life cycle.

### **Required competencies, roles, responsibilities and accountability for moving strategy supporting green campus initiatives**

According to Morris and Jamieson's (1997), it is not possible to translate university corporate strategy into green campus project strategy by process alone. Moving strategy through such processes and practices as discussed above will require an extensive range of personal competencies (for details on competencies refer Hornby and Thomas, 1989), and a clear definition of roles, responsibilities and accountabilities within the university and between academics and non-academic personnel. For lack of space and brevity, it is not possible to discuss in detail an appropriate competency framework and associated competencies, but core competencies related to project strategy provided elsewhere (in Morris and Jamieson 2004) are recommended.

## PROJECT MANAGEMENT SET-UP AS A FRAMEWORK FOR MANAGING GREEN CAMPUS INITIATIVES

Universities as PBO by default need to become formal PBO if they want to manage green campus initiatives to sustainable ends. Graham and Englund (2004) provide a sound and simple implementation process as illustrated in Figure 2 with adjustments to suit the theme of this paper.

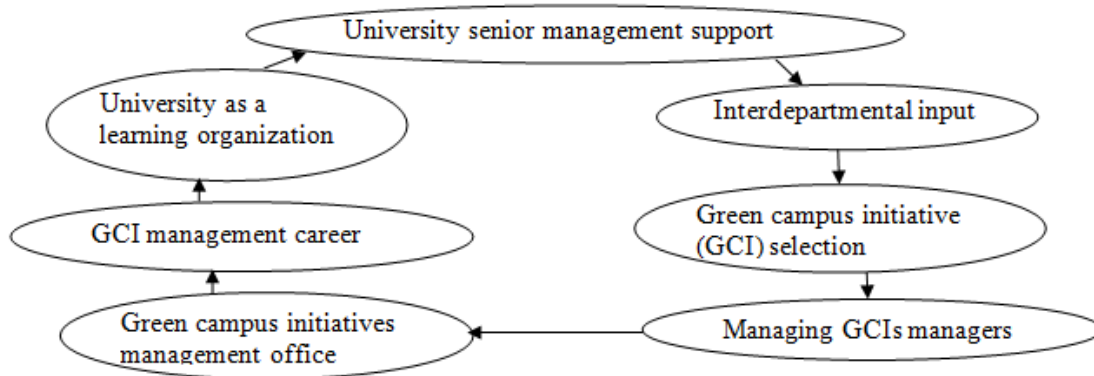


Figure 2: A Process for campus green initiatives (projects) success

Source: Modified from Graham and Englund (2004)

Graham and Englund (2004) in their seminal work argue that the implementation process begins with developing university senior management support. They further argue that if this is not accomplished, most of the succeeding steps will fail and the University will require new strategic leadership. Advancing it further, they emphasize the need to develop a green campus initiatives process using interdepartmental/school input. Without this input, they caution that the process will be unsuccessful because the department or college or school level cooperation is important. Developing a process for green campus initiative (GCI) (project) selection is recommended as the next step in the implementation process. They caution again that if this is not done correctly, there is a strong chance that massive fights for resources among competing projects could ensue. The fourth step is recommended to involve developing University upper managers' abilities in managing green campus initiative (GCI) managers. They further argue that if this is not done, there is a strong possibility of returning to the old ways of managing and not advancement to green campus initiative (GCI) management. Other subsequent steps recommended by Graham and Englund (op.cit) involve developing a campus initiative (GCI) management (project management) office which will help in (a) expediting the project management maturity scale, (b) determining a campus project management career ladder within the university non-academic staff cohort, (c) creating a learning organization to leverage strengths and (d) ensuring that past mistakes (sequence challenges) as discussed above are not repeated. The seven steps discussed briefly above are central to creating an environment for successful green campus initiative (GCI) management. For lack of space and brevity it is not possible to analyse each step in detail but details are found elsewhere (e.g. in Graham and Englund 2004; Turner and Simister (Eds) 2000).

As the 'green revolution' thinking pressures universities to embrace it fully in a sustainable way, university executives are obliged to adopt a new organizational mind set - to think about greening the campus differently. As opposed to 'business as usual' tack where green campus initiative (GCI) are ad-hoc and poorly funded, university top

management is required to target and achieve university goals in a new way. Rather than what Dinsmore (1999) refers to as “*silo thinking*,” university executives must perceive themselves as managers of a web of simultaneous green campus initiatives (GCIs) - green campus projects that include operational improvement and university turn-around programmes, as well as traditional capital expansion and information technology undertakings.

In the setting described above, the university executives perceiving themselves as managers of a web of simultaneous green campus initiatives (GCIs), and staff within departments/schools see their work as that of managing and successfully completing GCIs, as opposed to occupying a slot on a static university structure. At the coal face (at GCI) level projects will go through a university project management methodology which is designed around the university agreed project life cycle through phases: concept phase; planning phase; implementation phase; and ownership phase.

In order to have a sound internal university system, which is based on a particular project management methodology, GCIs will be organised into projects, programmes and portfolios. Hence a bottom-line focus for multiple GCIs under a common umbrella, with emphasis on the information consolidation and control side management.

The details on how GCIs will be accommodated through the life cycle and how a bottom-line focus for multiple GCIs will be managed are beyond the scope of this paper but could be found elsewhere (for example, Hartmann 1998; Turner 1999; Rwelamila 2007; Bolles 2002; Project Management Institute 2014 ).

## CONCLUSIONS

It emerges from the review that the green campus initiatives are going to be part of modern day higher education institutions. Sustainable GCIs will require universities which are committed to embrace project management best practices through what is known as 'enterprise project management' as a formal culture. Creating this culture will require specific and well thought five steps suggested by Graham and Englund (2004). These will include:

Step I: the need for the university to adopt and adapt formally a PM discipline, methodologies and techniques, policies, processes, procedures, and tools.

Step II: the need to put necessary structures in place - supporting GCI management champions, formally title and train GCI managers and sponsors, form a GCI management council or steering committee, and involve functional management (both academic and non-academic) in GCI and programme reviews and implement a GCI that drives a concerted effort to pull everything together.

Step III: aim to simplify by dismantling activities, structures, reports and metrics that detract from rather than support progress. Select people who are enthusiastic and knowledgeable about GCIs so that GCIs core teams accelerate their progress from forming to performing.

Step IV: the need to expand capabilities through generating new knowledge and sharing new best practices that expand the realm of what is possible both within the university and with outside partners.

Step V: the need to implement a strategic green campus programme office as a linchpin for implementing and maintaining a project approach across the university. It is important to note that the strategic green campus programme office will add value

by ensuring that GCIs are performed within established procedures and are in line with university strategies, and completed in ways that add value.

Therefore, it can be concluded that there is a need to further explore application of project management philosophies in the area of green campus management at the higher education institutions.

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