From primitive times to modern-day, man has been attached to the environment in which he finds himself. By distinguishing and naming certain parts of this environment, he formulates a visual image of his surroundings, in order to move with ease through it. If such reference should be disturbed, if way-finding cannot occur, mobile man is filled with the terror of being lost. (Lynch 1982; p. 123-125).

Hence the need for orientation. Within the modern city, many factors hinder the way-finding strategies of its users. Within stark, unmemorable and unidentifiable environments, single visual images merge in their similarity, preventing clarity in the mind of the user.
Kevin Lynch (Lynch:1982, p46-48) classifies the five physical elements which contribute to the environmental image. In order for a clear city image to be established, these elements are to be strengthened. The manner in which they are patterned together produces a rich urban environment. Each element can contribute to the identity of another.

_paths:
>> channels of movement are often the predominant element whereby other elements are ordered in the mind of the user. They may be streets, walkways, railroads etc.

_edges
>> linear boundaries, breaking the lateral continuity. They may be barriers, preventing movement from one region to another. Alternatively, they may act as seams along which interaction can occur. They are used to arrange generalized areas in the mind of the user.

_districts
>> areas within the environment, two-dimensionally mapped as having a specific identifying character. Identifiable from the inside or outside, the experience of a district varies within contexts.

_nodes
>> focal points, the cores between which the user travels. They may be concentrations of activity, brought about by some physical use.

_landmarks
>> external point references, usually simply-defined physical objects. They provide a constant direction by which users can position themselves. They often lend identity and structure to the environment.
The proposed site to be investigated in this dissertation is located in the South African Province of Gauteng. Tshwane, a municipal ward of this province has, as its central business district (CBD), the city of Pretoria. It is within this urban context that the subject under investigation will be modelled.

Pretoria was established in 1855 as the seat of the ZAR government, and continues to be the administrative capital of South Africa. The low-lying plain is given form through the rigid orthogonal street grid, related to the cosmic order of the sun’s path and the position of topographical access points (Jordaan, 1989: p.26). This grid finds its focal point in Church Square, as historical, religious meeting place.
The Pretoria precinct under investigation is bounded by D.F. Malan avenue to the West, Boom street to the North, Prinsloo street to the East and Proes street as Southern boundary. This area displays a broad variety of uses, differing greatly in urban character from the rest of the city. The form, organisation and general use, display a disintegration of the urban fabric. This lends a sense of detachment from the urban environment.

Interventions proposed are to re-stitch this precinct to the Pretoria urban fabric, bringing urban regeneration to the study area. The urban character unique to the area is to be optimised to the advantage of all city users. 

fig. 2.9 district within urban context
paths:
Paul Kruger Street and Church Street act as lateral axes within the orthogonal street grid of Pretoria. Emanating from Church Square, the historical civic centre, they divide the city into four quadrants, the Urbs Quadrata grid system devised by the Romans. They lend great significance to Church Square at their point of intersection (Holm, 1998:62). The rational gridiron layout of streets assists orientation within the city on a vehicular scale.
fig. 2.13. Pretoria - main paths and edges

fig. 2.14. Development of Pretoria within natural edges
The Daspoort and Schunweberge mountain ranges bound the city to the North and South. The Apies River and Steenoven Spruit define the city edge to the East and West. These natural barriers form between them a low-lying plain upon which the city is built. This type of landscape Christian Norberg Schulz classifies as a ‘classical landscape’, distinct elements composed to a meaningful order making “human fellowship” possible (Norberg-Schulz, 1980: p.47). The surrounding topography defines the urban edge as meeting point of natural and urban.

fig. 2.15 view of natural-urban edge
Districts can be identified in the city according to various criteria. The grouping of related functions often lends a unique character, for example the museum district, located South of Church square, including the city hall, national science museum and other strategically placed buildings. Other districts are determined by the nodes at their centre, such as Church Square precinct, a primarily civic district.

The study area, with its unique usage and urban fabric, possesses an informal character. The activities occurring on-street, the manner in which retail is conducted, creates a rich sensory experience. The vivid colours, distinct smells, and blaring music provide a vibrant rhythm, alternative to that of the civic centre. The taxi-dominated Bloed- and Boom Streets contribute to this image, as do the various train stations and taxi ranks.
fig. 2.17. aerial photograph of study area

fig. 2.18. figure ground study

fig. 2.19. existing nodes

fig. 2.20. proposed pedestrian paths

fig. 2.21. group study area
The group proposal for the district includes a pedestrian arcade system, running mid-block through the precinct, harnessing the current pedestrian activity. Pedestrian arcades are a vernacular characteristic of the Pretoria CBD, providing an alternative intriguing movement network. The inclusion of well-designed public spaces on these pedestrian routes introduces new commercial, social and cultural opportunities.
Nodes are created through intensified use: for transport (Bosman Street Station Square), retail (Sammy Marks Square) or civic (Pretorius Square) purposes. The common presence of public squares reinforces their importance. The increase of activity at these points encourages further use and development. Church square and Burgers Park are the two best examples of green open space within the city context. The common presence of public open space reinforces their importance. A diagram depicting designed open public space in the CBD reveals the lack of such urban elements in the Northern and Western regions. This may contribute to the visibly disjointed urban fabric.
fig. 2.25. view of Paul Kruger statue + raadsaal, church square
 Several buildings in Pretoria act as landmarks, their importance gained through height (National Reserve Bank), function (State Theatre) or historical relevance (Paul Kruger House). These buildings act as points of orientation for the users and means through which relative locations can be communicated.