Urban Deindustrialization and the Emergence of Landscapes of Adaptation and Resiliency
Case Study Analysis for Dissertation Research
Student poster abstract prepared for the 2015 Appalachian Energy Summit

Laura Schoenthaler  |  Author
PhD Design Student  |  College of Design
North Carolina State University
+1. 941.626.6141   |   lschoen2@ncsu.edu

Haig Khachatoorian  |  Advisor
Professor of Industrial Design  |  College of Design
North Carolina State University
+1. 919.515.8331  |  haig_khachatoorian@ncsu.edu

Introduction
In a global transition from hand production to machined production processes during the first ‘industrial’ revolution of 1760, industrial
manufacturing sites were methodically planned and situated to effectively make use of a region’s natural climate and landscape. In
cord to the growth of the industrial infrastructure was the formulation of dense urban areas that emerged around hubs of activity.
These industrial cities were situated in close proximity to a variety of natural resources such as quarries, coastlines, and forests,
with access to transportation via canals, roads, and railways. In a mode of expansion, the second industrial ‘technological’ revolution
of 1860 led to the electrification of factories, amplifying mechanized production methods, therefore increasing the capacity for mass
production via the production line. In progression, the third ‘digital’ revolution of the 1950s initiated a transition from the analog
mechanical processes and electric technologies towards a digital industry. These digital technologies fostered a network between
the manufacturing and service sectors, and the evolution of a knowledge-oriented economy where digital services, systems, and
platforms to increase operational efficiency. In the present day information era, these concepts have only progressed to a global
scale.

The unwavering knowledge-oriented economy marked by digital industry comes with the consequence of urban deindustrialization
phenomena. Decades of economic globalization, overseas outsourcing, and decentralization have forced these industrialized sites
do discontinue activity. Deindustrialization phenomena imperils urban form and infrastructure caused by the acute alteration of
topographies that are vulnerable to ecological, economic, and social decline. Interwoven within the built urban periphery, these sites
are often misunderstood as ‘waste landscapes’, and frequently perceived as deteriorated, hazardous, and unusable. The remains of
these built environments are static, as the planning and development strategies relied on at their inception frequently omitted
comprehensive consideration for the end of use. It is a growing cross-cultural problem that continues to grow on an international
scale exponentially in both size and complexity as the global economy becomes more reliant on services and data.

Approach/Method/Scheme
It is widely acknowledged that the reclamation and conservation of these types of post-industrial urban landscapes represent an
important sustainable objective. Often situated in advantageous and valuable central locations, there is an urgent to transform
these landscapes from environmentally impaired assets for productive uses, and reintegration into the surrounding urban locations.
While deindustrialization and waste landscape phenomena has been extensively researched and documented, little is known about
the broader emergent (macro and micro) patterns of post-industrial urbanist landscapes, nor the reciprocal design methods
integrated in the feedback loop of spatial, infrastructural, and narrative interventions.

Preliminary Results/Evaluation
Through a formal analysis of select case studies, a combination of inverted translational research and applied case study research
methods are used to address the urgent need to reclaim these landscapes, identifying the two distinct phenomenas associated with
post-industrial urbanism—reclamation charged by economic development and policy, and the other with environmental stewardship
and historic preservation. This applied methodology will provide a critical review of cross-cultural and international post-industrial
urban landscapes in order to establish sustainable design principles for the remediation and revitalization of similar deindustrialized
landscapes.
Conclusion/Future Work

Through a variety of qualitative and quantitative data, preliminary findings indicate that the strategies applied in the redevelopment of post-industrial urbanism landscapes are distinctly omitting principles of adaptation and resiliency, thus having an average dross-rate that will require maintenance within 10 - 15 years after initial project completion. As such, it is possible to conclude that design for sustainability must be implemented in the remediation and reuse of post-industrial landscape, considering multiple lifecycle and usage scenarios.

References


Loures, L. (2006). “(Re)-developing Post-industrial Landscapes: Applying Inverted Translational Research Coupled with the Case Study Research Method”. IPP - Politechnic Institute of Portalegre - ES AE; CIEO - Centre of Spatial Research and Organizations – UALG.