MPLS RESTORATIVE DEVELOPMENT

Technical Brief

Introduction to the project

Restorative Development is a systems model of urban redevelopment that challenges the linear, take-make-waste economic model through integrated and circular resource management. It equitably optimizes environmental, social, and economic outcomes and seeks to keep all material and resources at optimum use at all times and within a local economic setting.

The Restorative Development Partnership (RDP) includes representatives from public, private, and nonprofit organizations committed to advancing a replicable systems model of restorative development that equitably optimizes environmental, social, and economic outcomes for future redevelopment.

Through the Comprehensive Plan, the city has established a set of bold goals that must be realized within the next 20 years and some even sooner. These goals are restorative in nature and, in fact, cannot be achieved in the absence of restorative and circular development.

Scope of Work (SOW)

The scope of work included three key categories: 1) technical feasibility of an Integrated Utility Hub (IUH); 2) Restorative development benchmarking; and 3) Environmental, social, and economic performance assessment. This work resulted in three key deliverables: 4) City performance score card; 5) Workshops and training; and 6) a Baseline assessment report.

Learning objectives

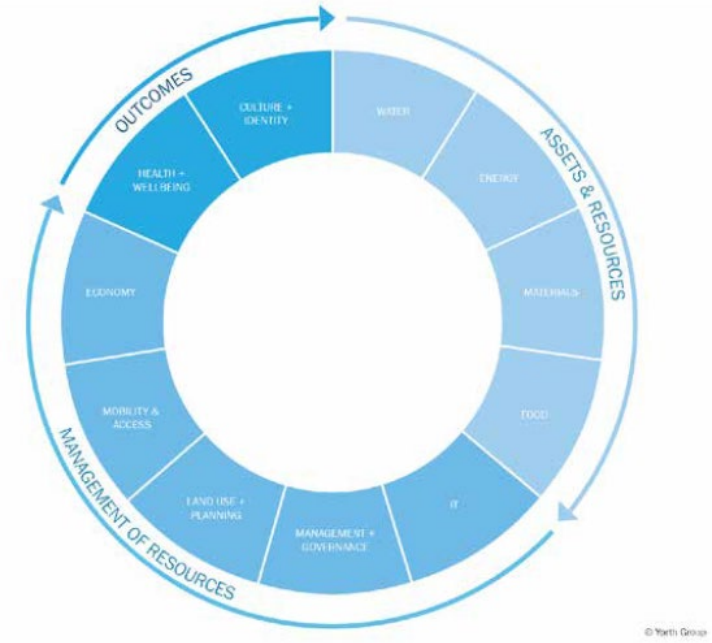
Project partners gained a new definition of success and an understanding for how individual successes can act as a barrier to restorative performance and the city's 2040 goal, which are restorative in nature. Accounting for externalities and applying systems accounting changes how value is measured. Diligent project partners came to understand how important infrastructure and programs that by conventional accounting would not pass economic feasibility can become feasible in the restorative context.

METHOD

Use of metrics

The project team used the Yorth Circular Insights (YCI) platform to assess city functions across 11 key performance areas and benchmarked against restorative goals as well as the city's own goals and vision for the future.

Image 1.1. Yorth´s 11 Key Performance Indicators.



The assessment looked specifically into the assets and resources within the city, how they are managed and to what end, before, finally, assessing the performance and outcomes of the above compared to restorative values.

The assessment phase resulted in a comprehensive citywide Baseline Assessment report which qualified and reported performance through a score card, and quantified performance in other areas through conventional economic calculations in a restorative systems context.

Each of the 11 KPIs per the wheel above have underlaying indicators that can be used to report on performance at various levels of hierarchy and details. Importantly, this project resulted in a baseline assessment from which progress can be measured and reported.

This data is stored within the software part of the restorative assessment tool and can also be used to generate various performance and equity reports and view performance from multiple viewpoints at the same time. The ability to zoom in and out of specific performance areas not only allows for the ability to focus on details with a complete systems perspective, but it is also critical when it comes to planning and managing outcomes towards desired goals.

Method

The project used a methodology that followed a path of research, assessment, stakeholder engagement, and communication of performance that was both qualitative to report progress/success in non-financial terms, and quantitative to provide real costs and gains in familiar dollar amounts.

The subsequent report followed a learning objective that included three key categories: 1) Reporting of current performance; 2) Restorative context, to provide familiarity with how restorative development varies from conventional/green development approaches; and 3) Deep dives, to further deepen the understanding for the restorative value proposition.

Workshops and training sessions followed an intentional path of 1) facilitating learning objectives on restorative principles and encourage engagement; 2) help stakeholders understand how the metrics function to further communication; and 3) help key players become familiar with current performance through a historic context that explains why and how things became what they are today; and through exercises, discuss ways for how restorative development can help correct the course, create equity, and set a base for a more resilient and competitive city and region. One key area included how an IUH and an IUH ecosystem can kickstart and catalyze restorative development and community wealth in the city.

Link to workshops: https://restorativedevelopmentpartnership.org/about/partnership-meetings/

Data collection and processing

Primary data was collected through direct information requests to key public agencies, developers, utility companies, and community. Interviews were conducted through in-person meetings, phone and Zoom calls.

Secondary data was mainly collected from government sources but where sufficient government data was not available, data was collected from other sources that are generally recognized as credible.

All sources are sited within the report and also in data sheets with links in each line item.

The data was processed in the Yorth's Integrated Performance Assessment (IPA) tool which uses algorithms to assess performance, account for externalities, identify vulnerabilities, risks, and economic leakages. The IPA produced score cards for over 2000 performance indicators across 11 key performance areas.

Processed data is secured within the Assessment software.

Data gaps

As expected, the study identified numerous data gaps, including many categories that are missing for restorative success. The largest data gaps were found in the space of Smart City, Regenerative Urbanism, and Material strategies for circular economy -- all categories that are central to the city's 2040 goals.

In a restorative context, each identified data gap represents an opportunity to improve and gain better insights and oversight which is key to better decision making and control over outcomes.

Quantification of data

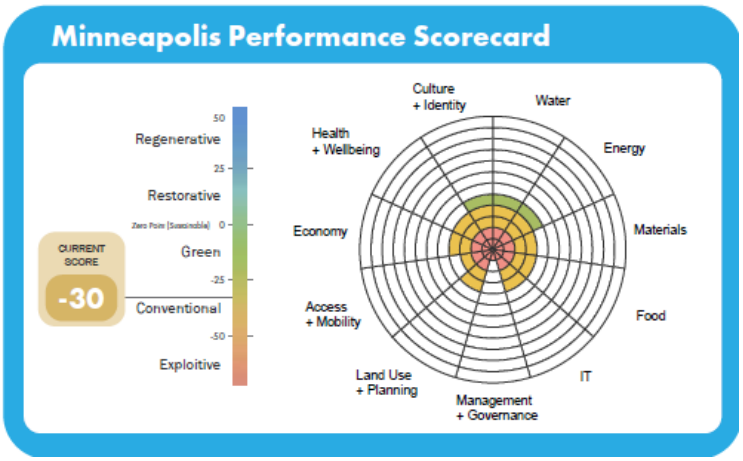
Economic equity and economic returns on restorative development were calculated by measuring the impact of historic, long-term land-use and economic development practices on the economy today. The study exposed the equity impact of inclusion/exclusion on the local and regional economy, both in terms of the tax base and economic outputs.

To make this approach to equity calculation more tangible, the project team narrowed a cost/benefit analysis for the Hawthorne McKinley and Hiawatha Howe neighborhoods before addressing the impact on the entire city (see next page for example and Restorative Development report, pages 91-93).

Key findings

The baseline assessment revealed a total score for Minneapolis of -29.95, which represents a 'conventional' city. See table 1.2. for total score card, and table 1.3. for breakdown by key categories.

Table 1.2. Minneapolis Restorative Score Card 2020



The scores and findings were introduced in three ways during the project:

1) Through individual trainings and communication of findings to each stakeholder segment;

2) In full restorative perspective in the workshops; and

3) In the final report

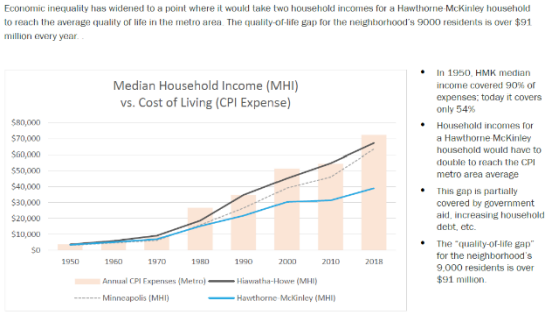
Table 1.3. Minneapolis scores by key categories

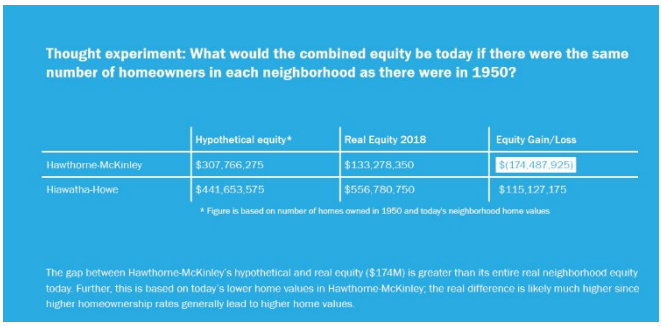
11 KEY PERFORMANCE INDICATORS	Total Scores	Current Status
WATER	-20.7	Green
ENERGY	-23.4	Green
MATERIALS	-35.0	Conventional
FOOD	-35.2	Conventional
IT	-27.0	Conventional
ACCESS + MOBILITY	-38.1	Conventional
LAND USE	-30.9	Conventional
MANAGEMENT + GOVERNANCE	Not rated	
ECONOMY	-31.0	Conventional
HEALTH + WELLBEING	-27.5	Conventional
CULTURE + IDENTITY	-25.6	Conventional

The city of Minneapolis and the surrounding region is rich in natural, public, human, and private sector resources that are all managed within their own linear and siloed system. While boosting one of the nation's strongest economy, the city has a demonstrated success story in providing a thriving place for corporations and industries.

(report pages 111-112)

However, the benefits from this economic development were not inclusive. The report gave examples of the cost of economic exclusion through an equity lens that also revealed the opportunity and return on investment (ROI) of restorative development in the Hawthorne McKinley neighborhood at and citywide.





Specifically, in the Hawthorne-McKinley, a restorative success would mean an increase in the tax base of $265 million annually. (report page 91)

For the city as a whole, the ROI of restorative development is over $2.8 billion. (report page 93)

Infrastructure and capital expenses

Much of the infrastructure required to deliver to the 2040 goals has not yet been built. Significant capital expenses will occur while developing towards the goals. Through siloed and uncoordinated actions, this capital is unintentionally being directed to support the current and outdated economic structure, continuing a tradition of incremental improvements, risking cementing the ´problem´ in place for the lifecycle of the investments.

Stakeholders and stakeholder goals

While studying stakeholder goals and values, the project team identified and introduced competing goals between stakeholders through workshops in the context of risk and ability of achieving set goals by each party.

The integrated utility hub (IUH)

A critical component in the development of restorative and integrated infrastructure, the technical feasibility of an Integrated Utility Hub (IUH) was confirmed by engineering and development experts from Ramboll and Orascom who recommend moving to the next phase at the earliest convenience.

The project established a clear feasibility of the restorative development approach for the city of Minneapolis and the region. In fact, the cost of inaction and continuing current state of affairs is highly likely to lock vital resources within an outdated and siloed structure and develop in ways that cause incremental improvement within the siloes, treating a symptom and miss addressing the cause. In summary, without the restorative development approach, the risk of causing serious, and continued equity losses for the city and its communities is high and real.

Challenges

Like other cities in the US, the City of Minneapolis is under threat from the current economic system. Over the last half a century, the economic system has been driven by a definition of success that is based on short-term monetary successes alone. Budgets are balanced while important infrastructure and programs that are critical to community and long-term economic health are not funded. Infrastructure is also centralized and siloed and favors a take-make-waste system that gets rid of valuable waste materials out of the local economy. Metrics used are also linear, siloed, and limited in nature, rewarding attention and investments in siloes that often function as a barrier to restorative goals, and in fact, the city's own 2040 goals.

A definition of success that rewards efforts that get rid of waste fast and cheap resulted in the growth of landfills and pollution. In a system where externalities were not accounted for, economic leakages became the new norm. Similarly, socioeconomic degradation was supported by another definition of success that was driven be the need to produce low or minimum wage jobs in poor neighborhoods as a way to help create jobs and wellbeing. This cemented poverty in place while minimum wages remained stagnant and cost of living increased. COVID-19 and the events related to the death of George Floyd have since brought these historically underlaying vulnerabilities to the surface. These accumulated and unaccounted for externalities and economic leakages now pose an incredible challenge to the current guard at the city that is working hard to repair and lay the foundations for a city that is equal and just for all residents and businesses. However, the findings show that Minneapolis and county agencies are doing so within a broken system.

The Need for Restorative Development in Minneapolis

In light of the above it is critical to understand that this need for change comes at a time when:

- As the only way they know how to secure dividends for their stakeholders, businesses and industries continue requiring permits to cause externalities (low wages, pollute, overwork employees, and cause other stresses that the city, county, and state will then have to pay for).
- Infrastructure funding gaps increase multifold each four years it is measured. (Source)
- Artificial intelligence threatens to replace jobs in a setting where, historically, new jobs would be created can now also be filled by artificial intelligence -- starting with low-skilled jobs, further increasing the burden on poor communities, and consequently the city/county/state. (report page 119)
- Almost half of all Americans have a total amount of $1100 or less to retire on, with one in six Americans not having any retirement savings, at all. (report page 8 and 12)
- Social security funds are under threat of depletion due to low taxation and poor use of funds while an increased number of people retire, and fewer workers will be available to float the bill. (Source)
- In the context of resilience and competitiveness, Minneapolis, like other US cities, imposes less tax than for example, European cities, and therefore have less capital to work with. (report page 3, 119)

In other words: the challenges are intensifying and there are chronically fewer resources to respond.

Considering the above, like other cities, Minneapolis is facing a mounting challenge that will not be solved within the current economic structure. Due to the severity and fast phase of this trend, these challenges must be treated with the utmost urgency and without delay.

Barriers to success

In terms of learning objectives, the project team noticed a major breakthrough by many key participants who have the ability to become champions for restorative development within their perspective fields.

However, restorative development is about integration of resources and collaboration around shared values. Without engagement and understanding in restorative principles by key stakeholders, success will be a challenge. This does not mean that it is not possible but what happens is that if restorative development were to occur in the absence of key stakeholders such as Planning, Economic Development, and Public Works, benefits would be produced but they are not there to capture them. (this is because they are still functioning by the principles of the linear model and have not yet learned how in the restorative development approach, benefits are generated across the environmental, social, and economic space, simultaneously).

Next Steps

Given the findings and the mounting challenges, as introduced in the sections above, the project team highly suggests advancing to the next phase without delay.

This project has established a critical baseline that is essential for a successful restorative/circular economic strategy. Therefore, the next phases of this project will continue to build capacity in each of the 11 key performance areas per appendix 3.2. in the main report and fill in data gaps, regulatory environment, and other pieces that might be missing.

Answer key questions such as who does what, where, how, who pays, who benefits, who owns what, who governs, etc. – how to address competing stakeholder goals and protect them from risks; and critically, where do we begin?

The project team recommends using the baseline assessment to generate a restorative roadmap that will detail how the city achieves the ROI of $2.8 billion per year and what it will mean to communities and businesses.

The Integrated Utility Hub (IUH) and the IUH Ecosystem

The IUH has been deemed technically feasible by the Ramboll/Orascom/Weitz engineer team.

The next phase will demonstrate how an IUH and the IUH ecosystem can kickstart and catalyze restorative development and a local economy worth over $3 billion over its lifecycle. This next phase will bring the IUH to a 10% technical design and financial feasibility.

As part of the IUH ecosystem, green and blue infrastructure will be examined in ways where IUH outputs that include compost, fertilizer, and water will be integrated with biochar and other potential biological processes with the intent to capture more values from the ecosystem that can manage heat, pollution, and other externalities while support economic development within communities, such as urban agriculture programs where it can help them become economically and socially sustainable.

Project challenges

COVID-19

Shortly into this project phase, the COVID-19 pandemic and its widespread impacts required staff and project participants to redirect their energy there. Further, associated health restrictions forced cancellation of planned meetings and convenings to learn about, discuss, and reach consensus on the restorative value proposition.

Prioritization

As often reported by city staff, the city is good at collaboration but would benefit from greater level of prioritization.

The two reasons mentioned above had significant impact on this project, adding over 8 months to the project timeline and put strains on participation by key stakeholders.

ADDENDUMS

Original scope for Phase 2:

1) Restorative Design
Resource and material flows for IUH (inputs and outputs)
IUH design to 10%
Restorative development design/circular economic development
Environment/social/economic outputs from IUH and IUH ecosystem (recommend best uses of reclaimed stormwater, clean energies, fertilizer/compost, food, etc.)
For green and blue infrastructure (including stormwater treatment and reuse, compost, biochar and nutrient capture and management)
For public benefits: affordable housing program (through utilities, food, jobs/careers, education, etc.)
Includes benefits and impact on developers
For public benefits: Beautiful neighborhoods (vegetation/water)
Includes impact on physical and mental health - city/developers/insurers/community perspectives
For public benefits: Jobs/career pathways within the IUH and IUH ecosystem
Economic, social, and generational ripple effects
For attractiveness for residents and businesses (identity)
Taxable income from IUH and IUH ecosystem
Cost savings from restorative development (IUH and IUH ecosystem)
Deliverables: 10% design document of an IUH that meets the needs of the city of Minneapolis; a chapter on a conceptual restorative development design which includes best uses of all outputs to generate restorative outcomes at multiple levels (environment/social/economic/brand identity)
1.1) Risk assessment for restorative development (compared to current)
Deliverable: identification of areas of environmental, social, and economic risk that require further attention and actions
2) Environmental Impact of IUH
Greenhouse gas emissions in a restorative city with IUH's (comparison with current/planned)
Impact from onsite capture and reuse of stormwater
Stormwater pollution and environmental impact of onsite capture and treatment
Environmental impact on water supply
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Deliverable: High Level Environmental Impact Statement
Community Impact
Number of job and career pathways created by IUH and the IUH ecosystem
Hiring from community and local business impact assessment
System impact of living wages
Community health impact (environmental, social, economic, identity of place)
Detail IUH and restorative strategies' impact on affordable housing
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Deliverable: High Level Community Impact Statement and chapter in the report

Community Ownership Pathways
Expose various community and 3Ps/4Ps ownership and governance models
Through in-person meetings, present and discuss contextualized data with stakeholders
Deliverable: A chapter in the final report and discussion with stakeholders
Policy mapping
Deliverable: A document that includes all key policies that affect restorative development. F.i. onsite stormwater capture and reuse, energy generation and distribution, zoning, and affordable housing.
Match restorative development and IUH related outcomes to stakeholders' goals
Deliverable: A chapter in the report that shows how restorative development helps stakeholders meet and surpass their goals
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Financial Assessment of IUH and IUH ecosystem
Financial Assessment
Economic Analysis of IUH ecosystem
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Deliverables: Financial proforma for IUH, financial proforma for IUH ecosystem, and an integrated proforma that

integrates the two.
City Score Card and Ecological Equity Statement for Restorative Development
Qualification of environmental, social and economic equity
Equity statement of IUH and IUH ecosystem with 20 year equity forecast
Quantification of environmental, social and economic equity
Financial statement of current status with historic trends with 20 year proforma
Restorative benefit score card
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Deliverable:
Cost/Benefit analysis of restorative development v. current
Deliverable:
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Facility Operations & Maintenance -
Deliverable: memo in the report
Governance
Roles and responsibilities of stakeholders in a restorative economy
Various perspectives: government, utility companies, developers, insurance, community
Deliverable: a chapter in the report that explains what to expect in a restorative economic context, who does what, and how, and why.
Through in-person meetings, present and discuss contextualized data with stakeholders for approval
Project Schedule
Internal project schedule, accounting and billing
Write Report
Report/Project acceptance and follow ups
Deliverable: A report that includes all the above, discussions with stakeholders, and approval