1 | INTRODUCTION
INTRODUCTION

THE LEGACY CITIES LAND PARADOX

Legacy cities possess considerable vacant and under-utilized land yet have a shortage of developable land. The cost of this vacant and underutilized land is enormous, creating economic and fiscal challenges as well as inclusion barriers. New solutions for developing land in legacy cities are necessary; solutions that make land more expensive to hold may hold particular promise.
2 | VACANCY + UNDERUTILIZATION
VACANCY + UNDERUTILIZATION | VACANCY STATISTICS

RESIDENTIAL BUILDING VACANCY

<table>
<thead>
<tr>
<th>Region</th>
<th>Legacy</th>
<th>Non-Legacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detroit</td>
<td>16.1%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

INDUSTRIAL LAND VACANCY

<table>
<thead>
<tr>
<th>Region</th>
<th>Innovation District</th>
<th>Overall City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detroit</td>
<td>2750 acres</td>
<td>2470 acres</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>720 acres</td>
<td>1394 acres</td>
</tr>
</tbody>
</table>

SOURCES: U.S. Census Bureau; Detroit Future City; Mass Economics Analysis
VACANCY + UNDERUTILIZATION | VACANCY IN CITIES

**VACANT PROPERTIES**
- NORA owned vacant properties
- Non-NORA owned vacant properties

**NEW ORLEANS**

**DETROIT**
Legacy City A | Industrial Land Use

Total Land: 4330 acres
Total Jobs: 19,700
Total Jobs/acre: 4.6

Underutilized:
- Land: 2010 acres
- Jobs: 1610
- Jobs/acre: 0.8
- Avg site size: 17.5 acres

Not Underutilized:
- Land: 2320 acres
- Jobs: 18,060
- Jobs/acre: 7.8
- Avg site size: 4 acres

SOURCE: Mass Economics Analysis
VACANCY + UNDERUTILIZATION | CAUSES

1 HIGH DEVELOPMENT COSTS

In many legacy cities, it is too cheap to sit on land and too expensive to develop land. In weak economies, land cannot be redeveloped without significant subsidies.

*SOURCES: Cushman Wakefield; Building Journal Construction Estimates; Mass Economics Analysis

*Construction costs per square foot are based on 80,000 sq. ft., 8-10 story office building
VACANCY + UNDERUTILIZATION | CAUSES

2. HISTORIC CONTAMINATION

3. LITTLE RELIANCE ON PROPERTY TAX

4. INSUFFICIENT OVERSIGHT

Weak or nonexistent regulation / enforcement regarding land issues leads to exploitative activities.

SOURCES: U.S. EPA; Lincoln Institute of Land Policy - FiSC Database; Mass Economics Analysis
3  LAND and ECONOMIC INCLUSION
**LAND and ECONOMIC INCLUSION**

**Land challenges limit economic inclusion opportunities**

Land challenges have economic growth and fiscal implications. They also undermine economic inclusion.

Land-intensive sectors offer many accessible, middle-wage jobs to workers without college degrees. Locked land limits these opportunities for middle-wide job growth.

These trends are intensifying — blue collar jobs consume more space while white-collar jobs consume less space, and a wider range of spaces.
LAND and ECONOMIC INCLUSION

Percent Of Jobs Which Require Less Than Four-Year Degree

vs.
Acres per 100 Employees

Average Wages for HS Graduates

vs.
Acres per 100 Employees

\[ y = 0.0331x + 0.5714 \]
\[ R^2 = 0.2354 \]

\[ y = -2251.1x + 57685 \]
\[ R^2 = 0.0476 \]

*Data on slides 12 and 13 are from Minneapolis, MN, but relationships hold when using jobs + wage data from Detroit MSA

SOURCES: QWI; City of Minneapolis – Industrial Land Use Study and Employment Policy Plan; City of Fort Collins - Land/Building Needs Analysis for Targeted Industries; Economic Growth Effects Analysis for the Bay Area to Central Valley Program-Level Environmental Impact Report and Tier 1 Environmental Impact Statement; City of Klamath Falls - Johnson Gardner Study; City of Scappoose Urban Growth Boundary Amendment; Employment Land Needs Assessment and Action Plan for Oklahoma City; Mass Economics Analysis
LAND and ECONOMIC INCLUSION

Percent Of Jobs Which Require Less Than Four-Year Degree vs. Acres per 100 Employees (excluding transportation and warehousing)

\[ y = 0.0331x + 0.5716 \]
\[ R^2 = 0.1478 \]

Average Wages for HS Graduates vs. Acres per 100 Employees (excluding transportation and warehousing)

\[ y = -1405.5x + 55840 \]
\[ R^2 = 0.011 \]

Average Wage, HS: $43,200
Average Wage, Retail: $29,500

SOURCES:
QWI; City of Minneapolis – Industrial Land Use Study and Employment Policy Plan; City of Fort Collins - Land/Building Needs Analysis for Targeted Industries; Economic Growth Effects Analysis for the Bay Area to Central Valley Program-Level Environmental Impact Report and Tier 1 Environmental Impact Statement; City of Klamath Falls - Johnson Gardner Study; City of Scappoose Urban Growth Boundary Amendment; Employment Land Needs Assessment and Action Plan for Oklahoma City; Mass Economics Analysis

*Data on slides 12 and 13 are from Minneapolis, MN, but relationships hold when using jobs + wage data from Detroit MSA
LAND and ECONOMIC INCLUSION

Average Employment Density (sq ft per employee)

WAREHOUSE + DISTRIBUTION

- General Warehouse (+215 sf)
- Large Scale / High Bay (0 sf)
- General Industrial (+22 sf)
- Light Industrial (Bus. Park) (+161 sf)

INDUSTRIAL

- General Industrial (+22 sf)
- Light Industrial (Bus. Park) (+161 sf)

OFFICE

- General Office (-75 sf)
- IT Data Center (N/A)
- Business Park (-65 sf)
- Business Center (-108 sf)
- Call Center (-53 sf)

SOURCES: Deloitte, Maxfield Research Inc.
RECOMMENDATIONS

1 Coordinate public sector holdings to create larger sites

776 adjacent individual parcels can be aggregated to form 131 parcels that are two acres or larger in size.

Approximately 63% of the aggregated parcels 2+ acres in size are currently zoned residential and would require rezoning for industrial or commercial uses.

SOURCE: Mass Economics Analysis
# RECOMMENDATIONS

## 2 Rationalize Industrial Land

A. Identify and invest in industrial land that has future use

B. Transition land to wider range of uses (live work, tech, etc.)

<table>
<thead>
<tr>
<th>Building Characteristics</th>
<th>LOCAL B2B / OFF-SITE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Area (sq ft)</td>
<td>16,200</td>
</tr>
<tr>
<td>Number of Stories</td>
<td>1.0</td>
</tr>
<tr>
<td>Ceiling Heights</td>
<td>16.0 ft</td>
</tr>
<tr>
<td>Building Class (A=1, B=2, C=3)</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking / Loading</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading Docks</td>
<td>2.5</td>
</tr>
<tr>
<td>Parking Spaces</td>
<td>25.0</td>
</tr>
<tr>
<td>Parking Spaces (per 1k sq ft)</td>
<td>1.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Area (per acre)</td>
<td>2.5</td>
</tr>
<tr>
<td>FAR</td>
<td>0.21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment Density</th>
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</thead>
<tbody>
<tr>
<td>Employees / Bldg Area (per 1k sq ft)</td>
<td>0.2</td>
</tr>
<tr>
<td>Employees / Land Area (per acre)</td>
<td>1.0</td>
</tr>
<tr>
<td>Employees / Parking Space</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*other types also measured:
- Local B2B/On-Site (with nine sub-clusters)
- Food/Beverage Distribution
- Food Manufacturing
- Beverage Manufacturing
- Six subclusters within Local B2B/Off-Site

RECOMMENDATIONS

3  Create new real estate models for sectors that create inclusive opportunity

RECOMMENDATIONS

4 Increase the cost of acquiring and holding land

- Explore alternative tax regimes, e.g., taxing land at higher rate than buildings
- Enforce existing property tax regulations
- Place additional encumbrances on vacancy (e.g., water management, plant species control)
- Restrict sales to serial tax delinquents
- Land bank sites that don’t meet certain criteria (size, market feasibility) to reduce speculation
- Create strategies for densifying activity on under-utilized sites

SOURCES: An Introduction to Two-Rate Taxation of Land and Buildings, Jeffrey P. Cohen and Cletus C. Coughlin, 2005; Conversation with Jonathan Tate, 2015