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I. Adaptive Reuse and Industrial Heritage Preservation

Adaptive Reuse and Industrial Heritage Preservation

The revitalization of Portland's declining industrial district presents a unique opportunity to transform the area while honoring its rich industrial heritage. Adaptive reuse of existing structures will be a cornerstone of this redevelopment, aligning with Portland's commitment to sustainability and historic preservation.

The district's industrial buildings, many dating back to the early 20th century, possess inherent architectural value and cultural significance. These structures, characterized by their robust construction, high ceilings, and expansive floor plans, are ideally suited for conversion into mixed-use spaces that can accommodate modern needs while preserving the area's distinctive character.

To guide the adaptive reuse process, we propose implementing a set of design guidelines that prioritize the retention of key architectural features. These may include exposed brick walls, steel trusses, large windows, and other industrial elements that contribute to the buildings' authenticity. The Portland Historic Landmarks Commission will be consulted to ensure compliance with local preservation ordinances and to identify structures of particular historical significance.

One successful precedent for this approach is the Pearl District, also in Portland, where former warehouses and industrial buildings have been transformed into loft apartments, galleries, and retail spaces. Drawing inspiration from this model, we propose the following adaptive reuse strategies:

- 1. Warehouse-to-Workspace Conversion:** Large warehouse spaces can be subdivided into flexible office environments for tech startups and creative agencies. The high ceilings and open floor plans are well-suited for collaborative work environments. Examples include the Ford Building in Southeast Portland, which now houses creative businesses in a former Model T factory.
- 2. Factory-to-Residential Transformation:** Multi-story factory buildings can be converted into loft-style apartments or condominiums. The Schoolhouse Electric building in Northwest Portland serves as a prime example, where a former factory now houses both residential units and a flagship store.
- 3. Industrial-to-Retail Adaptation:** Ground-floor spaces in former industrial buildings can be repurposed for retail, restaurants, and artisanal workshops. This approach has been successfully implemented in cities like New York's Meatpacking District and London's Shoreditch.
- 4. Preservation of Industrial Equipment:** Where possible, we recommend retaining and incorporating industrial machinery and equipment into the new designs. This not only serves as a visual reminder of the area's heritage but can also function as unique design elements. The Machine Works building in Portland's Central Eastside Industrial District exemplifies this approach, with preserved machinery integrated into its office spaces.

To facilitate these adaptive reuse projects, we propose working with the Portland Bureau of Development Services to streamline the permitting process for buildings identified as suitable for preservation and repurposing. This may involve creating a special overlay zone that allows for greater flexibility in use while maintaining stringent preservation standards.

The plan will also incorporate the concept of "embodied energy" in its approach to adaptive reuse. By preserving and repurposing existing structures, we can significantly reduce the carbon footprint associated with new construction. This aligns with Portland's Climate Action Plan and supports the city's goal of reducing carbon emissions by 80% by 2050.

To further emphasize the area's industrial heritage, we propose the following initiatives:

- 1. Industrial Heritage Trail:** Create a self-guided walking tour that highlights the district's industrial history, with interpretive signage and augmented reality elements that allow visitors to

visualize the area's past.

2. Adaptive Reuse Showcase: Designate certain buildings as exemplars of successful adaptive reuse, offering tours and educational programs to promote the benefits of this approach.
3. Industrial Arts Program: Establish a program that supports local artists in creating public art installations that celebrate the district's industrial heritage, using reclaimed materials from the area.
4. Heritage Documentation Project: Partner with local universities and historical societies to comprehensively document the area's industrial history through oral histories, archival research, and digital preservation of architectural plans and photographs.

To address potential challenges in adaptive reuse, we recommend the following:

1. Seismic Retrofitting: Many older industrial buildings may require significant structural upgrades to meet current seismic standards. We propose working with the Portland Bureau of Development Services to develop a cost-sharing program for seismic retrofits, potentially using tax increment financing (TIF) funds.
2. Environmental Remediation: Given the industrial history of the area, some sites may require environmental cleanup. We suggest partnering with the Oregon Department of Environmental Quality to assess contamination levels and develop remediation strategies, potentially leveraging EPA Brownfields grants for funding.
3. Code Compliance: Adapting industrial buildings to new uses often requires significant upgrades to meet modern building codes. We propose working with the city to develop a flexible approach to code compliance that balances safety requirements with preservation goals, similar to the California Historical Building Code.
4. Accessibility: Many historic industrial buildings present challenges for ADA compliance. We recommend developing guidelines for sensitive accessibility upgrades that preserve architectural integrity while ensuring inclusivity.

The adaptive reuse strategy will be guided by the Secretary of the Interior's Standards for Rehabilitation, which provide a framework for preserving historic character while allowing for necessary alterations. These standards will be incorporated into local design guidelines specific to the district.

To incentivize private investment in adaptive reuse projects, we propose the following:

1. Transfer of Development Rights (TDR) Program: Allow property owners who preserve historic structures to sell unused development rights to developers in other parts of the city, similar to Seattle's successful TDR program.
2. Facade Improvement Grants: Establish a grant program to support the restoration of historic building facades, modeled after similar programs in cities like Chicago and San Francisco.
3. Adaptive Reuse Ordinance: Develop an ordinance that streamlines the approval process for adaptive reuse projects, similar to Los Angeles' Adaptive Reuse Ordinance, which has been credited with revitalizing that city's downtown.
4. Historic Preservation Tax Credits: Work with the state to extend Oregon's Special Assessment of Historic Property program to include commercial properties in the district, providing property tax relief for qualifying rehabilitation projects.

By prioritizing adaptive reuse and industrial heritage preservation, this plan aims to create a unique urban environment that honors Portland's industrial past while fostering a vibrant, sustainable

future. The preservation of these historic structures will not only contribute to the area's distinctive sense of place but also support sustainability goals by reducing waste and conserving resources. Moreover, the authentic character created through adaptive reuse will be a key factor in attracting the creative professionals and innovative businesses that will drive the district's economic revitalization.

II. Green Infrastructure Integration

1. Stormwater Management: Given Portland's frequent rainfall, implementing innovative stormwater management solutions is paramount. We propose a network of bioswales, rain gardens, and permeable pavements throughout the district. These features will reduce runoff, filter pollutants, and recharge groundwater. Specific measures include:

- Installing bioswales along major streets, capable of handling a 25-year storm event
- Creating a series of interconnected rain gardens in public spaces and courtyards
- Utilizing permeable pavement for at least 50% of parking areas and low-traffic streets

These solutions align with Portland's Stormwater Management Manual (SWMM) and the city's Green Streets Policy, which requires green street facilities for all city-funded development, redevelopment, or enhancement projects.

2. Urban Tree Canopy: Increasing the tree canopy is crucial for improving air quality, reducing the urban heat island effect, and enhancing aesthetics. We propose:

- Planting street trees along all major thoroughfares, aiming for a minimum 30% canopy coverage
- Creating pocket parks with diverse native tree species
- Encouraging green roofs and rooftop gardens on new and retrofitted buildings

This aligns with Portland's Urban Forestry Management Plan and supports the city's goal of achieving 33% tree canopy coverage by 2035.

3. Green Corridors: Establishing a network of green corridors will improve connectivity, promote biodiversity, and provide recreational opportunities. Our plan includes:

- Converting underutilized railway lines into linear parks and bike paths
- Creating wildlife corridors that connect existing green spaces
- Implementing pollinator pathways with native plantings

These initiatives support Portland's Climate Action Plan and Comprehensive Plan, which emphasize the importance of green networks for climate resilience and livability.

4. Blue-Green Infrastructure: Integrating water features with green spaces can provide multiple benefits. We propose:

- Daylighting buried streams and creating naturalized waterways
- Constructing wetland parks for stormwater retention and habitat creation
- Implementing water-sensitive urban design principles in all new developments

These measures align with Portland's Watershed Management Plan and support the city's goals for improving water quality and habitat restoration.

5. Green Building Standards: Encouraging sustainable building practices is essential for reducing the district's environmental footprint. We recommend:

- Requiring LEED Gold certification (or equivalent) for all new commercial buildings over 20,000 square feet

- Incentivizing green retrofits for existing structures through expedited permitting and density bonuses
- Promoting the use of eco-friendly materials and energy-efficient systems

These standards are consistent with Portland's Green Building Policy and Climate Action Plan.

6. Urban Agriculture: Integrating food production into the urban fabric promotes sustainability and community engagement. Our plan includes:

- Designating areas for community gardens and urban farms
- Encouraging rooftop agriculture on suitable buildings
- Implementing vertical gardening on appropriate structures

This aligns with Portland's Urban Agriculture Zoning Code and supports the city's food security goals.

7. Green Energy Infrastructure: Incorporating renewable energy sources is crucial for reducing carbon emissions. We propose:

- Installing solar panels on public buildings and encouraging their use on private structures
- Exploring district heating and cooling systems powered by renewable sources
- Implementing smart grid technology to optimize energy distribution

These initiatives support Portland's 100% Renewable Energy Resolution and Climate Action Plan.

8. Sustainable Transportation Infrastructure: Promoting eco-friendly transportation options is essential for reducing emissions and improving mobility. Our plan includes:

- Expanding bike lanes and implementing a bike-share program
- Creating pedestrian-friendly streetscapes with wide sidewalks and traffic calming measures
- Integrating electric vehicle charging stations throughout the district

These measures align with Portland's Transportation System Plan and support the city's Vision Zero goals.

9. Ecosystem Services: Maximizing the ecosystem services provided by green infrastructure is a key focus. We aim to:

- Quantify and optimize the carbon sequestration potential of green spaces
- Enhance air quality through strategic placement of vegetation
- Improve mental health and well-being through access to nature

This approach supports Portland's Ecosystem Services Valuation and Climate Action Plan.

10. Monitoring and Adaptive Management: Implementing a robust monitoring system will ensure the effectiveness of green infrastructure over time. We propose:

- Installing sensors to track stormwater flow, air quality, and urban heat island effects

- Conducting regular biodiversity assessments
- Implementing an adaptive management approach to refine strategies based on collected data

This aligns with Portland's Smart City PDX initiative and supports evidence-based decision-making.

The integration of these green infrastructure elements will transform the industrial district into a model of urban sustainability. By adhering to Portland's existing environmental policies and pushing beyond them, we can create a neighborhood that not only meets current sustainability standards but also sets new benchmarks for urban development.

Our approach is informed by successful precedents such as Seattle's Thornton Creek Water Quality Channel, which effectively manages stormwater while creating a vibrant public space, and Copenhagen's climate-adapted neighborhood, Østerbro, which demonstrates the integration of blue-green infrastructure at a district scale.

The proposed green infrastructure plan will require collaboration between various city departments, including the Bureau of Environmental Services, Portland Parks & Recreation, and the Bureau of Planning and Sustainability. It will also necessitate partnerships with local environmental organizations, academic institutions, and community groups to ensure successful implementation and long-term stewardship.

By prioritizing green infrastructure, we can create a resilient, healthy, and attractive neighborhood that supports both human and ecological well-being. This approach will not only revitalize the industrial district but also position Portland as a leader in sustainable urban development, attracting innovative businesses and residents who value environmental responsibility and quality of life.

III. Attracting Startups and Creative Professionals

The plan includes the creation of diverse workspace options to cater to different business needs. This involves converting former industrial buildings into mixed-use spaces that offer:

1. Coworking spaces: Open-plan areas with hot desks, dedicated desks, and small private offices.
2. Incubator and accelerator spaces: Tailored environments for early-stage startups with mentorship programs and shared resources.
3. Makerspaces and fabrication labs: Equipped with 3D printers, CNC machines, and other tools to support hardware startups and artisans.
4. Creative studios: Designed for artists, designers, and multimedia professionals with appropriate lighting and ventilation.

These spaces will be developed in accordance with Portland Zoning Code Chapter 33.130, which governs commercial and mixed-use zones. We'll work within the Employment and Industrial (EI) zone designation to ensure compatibility with the area's industrial heritage while allowing for new creative uses.

Technology Infrastructure:

To attract tech startups, we'll implement a robust technology infrastructure throughout the district:

1. High-speed fiber-optic internet: Partner with local ISPs to install gigabit-speed internet connections.
2. 5G network coverage: Collaborate with telecom providers to ensure comprehensive 5G coverage.
3. Smart city technologies: Integrate IoT sensors and data analytics platforms to optimize energy use, traffic flow, and public services.

This infrastructure development aligns with Portland's Smart City PDX initiative, leveraging technology to improve livability and economic opportunities.

Innovation Ecosystem Support:

To foster a thriving innovation ecosystem, we propose:

1. Establishing a district-wide innovation hub: A central facility offering business support services, networking events, and educational programs.
2. Partnering with local universities: Collaborate with institutions like Portland State University and Oregon Health & Science University to create satellite campuses or research centers in the district.
3. Attracting anchor companies: Incentivize established tech companies to locate offices or R&D facilities in the area, creating a talent pool and potential collaborators for startups.

These initiatives will be developed in line with Portland's Economic Development Strategy, which emphasizes cluster development and innovation support.

Creative Placemaking:

To appeal to creative professionals and enhance the district's character, we'll implement creative placemaking strategies:

1. Public art program: Commission local artists to create site-specific installations throughout the district.
2. Performance spaces: Develop outdoor amphitheaters and indoor venues for live music, theater, and other performances.
3. Pop-up retail and gallery spaces: Repurpose vacant storefronts for temporary exhibitions and retail experiences.

These efforts will align with the Portland Public Art Program guidelines and the city's Cultural District designation criteria.

Amenities and Quality of Life:

To make the district attractive for both work and living, we'll focus on developing amenities that cater to young professionals:

1. Mixed-use developments: Encourage the construction of buildings with ground-floor retail and upper-floor residential units.
2. Fitness and wellness facilities: Attract gyms, yoga studios, and wellness centers to promote a healthy work-life balance.
3. Diverse dining options: Incentivize a mix of restaurants, cafes, and food trucks to create a vibrant culinary scene.
4. Green spaces and recreational areas: Develop pocket parks, rooftop gardens, and recreational facilities within walking distance of workspaces.

These developments will be guided by Portland's Central City 2035 Plan, which emphasizes the creation of complete neighborhoods with diverse amenities.

Transportation and Connectivity:

To ensure easy access and sustainable commuting options, we'll enhance transportation infrastructure:

1. Bike lanes and bike-sharing programs: Expand the existing bike network and introduce a district-wide bike-sharing system.
2. Enhanced public transit: Work with TriMet to increase bus and light rail service to the district.
3. Car-sharing and electric vehicle infrastructure: Partner with car-sharing services and install EV charging stations throughout the area.

These improvements will align with Portland's Transportation System Plan and Climate Action Plan, promoting sustainable transportation options.

Branding and Marketing:

To attract startups and creative professionals, we'll develop a comprehensive branding and marketing strategy:

1. District identity: Create a distinctive brand identity that reflects the area's industrial heritage and innovative future.
2. Digital presence: Develop a dedicated website and social media channels to showcase the district's offerings and success stories.
3. Targeted outreach: Partner with startup accelerators, creative agencies, and tech industry associations to promote the district as a prime location for their members.

This branding effort will be coordinated with Travel Portland and the Portland Development Commission to ensure consistency with citywide economic development messaging.

Talent Development and Retention:

To support the growth of startups and creative businesses, we'll focus on developing and retaining local talent:

1. Coding bootcamps and tech training programs: Partner with organizations like Code Oregon to offer accessible tech education.
2. Creative workshops and skill-sharing programs: Facilitate knowledge exchange among creative professionals through regular workshops and meetups.
3. Internship and apprenticeship programs: Collaborate with local businesses to create opportunities for students and early-career professionals.

These initiatives will align with Portland's Workforce Development Plan and the goals of the Portland Youth Employment Program.

Regulatory Support:

To streamline the process for startups and creative businesses to establish themselves in the district, we'll implement:

1. One-stop permitting center: Create a dedicated office within the district to assist with business licenses, building permits, and other regulatory requirements.
2. Zoning flexibility: Work with the Bureau of Planning and Sustainability to introduce zoning overlays that allow for greater flexibility in mixed-use developments and live-work spaces.
3. Startup-friendly policies: Advocate for policies that reduce barriers to entry for new businesses, such as temporary use permits for pop-up shops and simplified home-based business regulations.

These efforts will be developed in accordance with Portland's Regulatory Improvement Code Amendment Package (RICAP) process, ensuring alignment with citywide regulatory streamlining efforts.

Financial Incentives:

To make the district financially attractive for startups and creative businesses, we propose:

1. Tax credits for job creation: Work with the Oregon Department of Revenue to extend the Oregon New Jobs Tax Credit to businesses locating in the district.
2. Rent subsidies for startups: Establish a program that offers short-term rent subsidies for qualifying startups in their first year of operation.
3. Creative enterprise grants: Partner with the Regional Arts & Culture Council to offer grants for creative businesses that contribute to the district's cultural vibrancy.

These incentives will be structured to comply with Oregon state law and Portland's economic development policies, ensuring equitable distribution and measurable outcomes.

By implementing these comprehensive strategies, we aim to create a vibrant ecosystem that attracts and supports startups and creative professionals while preserving the district's industrial character. This approach aligns with Portland's broader economic development goals and positions the revitalized district as a key driver of innovation and creativity in the city.

IV. Zoning and Land Use Analysis

Zoning and Land Use Analysis

The existing industrial district in Portland presents a unique opportunity for transformative redevelopment through strategic rezoning and land use modifications. Current zoning designations primarily consist of IG1 (General Industrial 1) and IH (Heavy Industrial), which have historically supported manufacturing, warehousing, and freight activities. To facilitate the envisioned mixed-use, eco-friendly neighborhood, we propose a comprehensive rezoning strategy that introduces greater flexibility while preserving elements of the area's industrial character.

Our analysis recommends implementing a new EX (Central Employment) zone across much of the district, with targeted areas rezoned to CM3 (Commercial Mixed-Use 3). The EX zone, as defined in Portland Zoning Code Chapter 33.140, allows for a mix of uses with an emphasis on employment, while still permitting residential development. This aligns well with our goals of attracting tech startups and creative professionals while maintaining an active, job-producing district. The CM3 zone, detailed in Chapter 33.130, enables higher-density mixed-use development along key corridors and nodes, supporting the creation of vibrant, walkable centers within the neighborhood.

To preserve industrial heritage and maintain some traditional employment uses, we propose retaining pockets of IG1 zoning in strategic locations. This approach, supported by Portland's 2035 Comprehensive Plan Policy 6.37 (Industrial Land), ensures a diverse economic base while allowing for adaptive reuse of certain industrial structures for creative office, makerspace, and light manufacturing uses.

Implementing these zoning changes will require amendments to the Portland Zoning Map and potentially the Comprehensive Plan Map. The process, governed by Chapter 33.855 (Zoning Map Amendments), involves extensive public outreach, impact assessments, and approval from the Planning and Sustainability Commission and City Council. We anticipate this rezoning effort to take 12-18 months, factoring in required studies and community engagement.

To complement the zoning changes, we propose overlay districts to achieve specific planning objectives:

1. Design Overlay Zone (d): Applied throughout the district to ensure high-quality design that respects industrial heritage. This overlay, as per Chapter 33.420, will require design review for new development and major renovations.
2. River Environmental Overlay Zone (e): Extending along waterfront areas to protect riparian habitats and water quality while allowing for appropriate development. This aligns with Portland's River Plan/North Reach objectives.
3. Centers Main Street Overlay Zone (m): Applied to key corridors to foster pedestrian-oriented, mixed-use development with active ground floors. This overlay, detailed in Chapter 33.415, supports the creation of vibrant commercial nodes.

Land use regulations within these zones and overlays will be tailored to support the district's revitalization goals. Key provisions include:

- Floor Area Ratios (FAR) ranging from 3:1 in EX zones to 5:1 in CM3 zones, with bonuses for affordable housing and green building features.
- Building height limits of 65-100 feet, with potential for height bonuses in strategic locations.
- Required ground-floor active uses along designated street frontages.
- Reduced parking requirements to encourage alternative transportation modes.
- Incentives for adaptive reuse of existing industrial structures.
- Requirements for publicly accessible open space in larger developments.

These land use regulations draw inspiration from successful industrial district revitalizations such as Portland's own Pearl District and Seattle's South Lake Union. They aim to strike a balance between fostering density and maintaining the area's unique character.

To support the integration of green infrastructure and sustainable design, we propose incorporating Portland's Eco-District framework into the zoning code. This approach, aligned with the city's Climate Action Plan, would require developments to meet stringent sustainability standards for energy efficiency, stormwater management, and urban habitat creation.

The proposed zoning and land use strategy also addresses potential conflicts between existing industrial uses and new mixed-use development. Buffer zones and performance standards will be established to mitigate noise, odor, and visual impacts. These measures, guided by Portland's Title 18 Noise Control regulations and industrial compatibility best practices, will ensure a harmonious coexistence of diverse uses within the district.

To facilitate the adaptive reuse of industrial buildings, we recommend adopting a flexible building code approach similar to Los Angeles' Adaptive Reuse Ordinance. This would allow for streamlined permitting and alternative compliance methods for the conversion of industrial structures to new uses, preserving architectural heritage while meeting modern safety standards.

The proposed zoning framework also supports urban agriculture initiatives by permitting community gardens and rooftop farming as allowed uses in all zones. Additionally, we suggest incorporating provisions for bonus floor area or height in exchange for the integration of food production spaces within new developments.

To address affordable housing concerns and mitigate gentrification risks, we propose implementing inclusionary zoning requirements in line with Portland's recently adopted policy. This would mandate that 20% of units in new residential developments of 20 or more units be affordable to households earning 80% of the area median income. Additionally, we recommend exploring the creation of a Tax Increment Financing (TIF) district to generate funds for affordable housing preservation and development within the area.

The proposed zoning and land use strategy aligns with several key policies in Portland's 2035 Comprehensive Plan, including:

- Policy 3.53: Industrial Sanctuaries
- Policy 3.63: Employment areas in centers
- Policy 4.29: Scale transitions
- Policy 6.22: Sustainable transportation
- Policy 8.19: Historic and cultural resource protection

To ensure successful implementation, we recommend a phased approach to rezoning:

Phase 1 (Years 1-2): Rezone key catalyst sites to EX and CM3, focusing on areas with vacant or underutilized properties.

Phase 2 (Years 3-5): Expand EX zoning to broader areas, implement overlay districts.

Phase 3 (Years 6-10): Assess outcomes and make necessary adjustments, potentially rezoning remaining IG1 areas based on market demand and community needs.

This phased approach allows for careful monitoring of development impacts and provides flexibility to adapt the strategy as the neighborhood evolves.

In conclusion, the proposed zoning and land use analysis provides a framework for transforming the industrial district into a vibrant, mixed-use neighborhood while preserving its unique character and economic vitality. By strategically applying new zoning designations, overlay districts, and tailored land use regulations, we can create an environment that supports innovation, sustainability, and community development. This approach, grounded in Portland's existing planning policies and informed by successful precedents, offers a balanced path forward for the district's revitalization.

V. Tax Incentives and Public-Private Partnerships

Tax Incentives and Public-Private Partnerships

To effectively revitalize the declining industrial district in Portland, Oregon, a strategic approach to tax incentives and public-private partnerships is essential. These tools can catalyze development, attract investment, and ensure the project's long-term success while aligning with community goals.

Tax Increment Financing (TIF) should be a cornerstone of the incentive program. By leveraging future property tax revenues generated from the increased value of redeveloped properties, TIF can fund infrastructure improvements, brownfield remediation, and other public amenities without increasing the tax burden on existing residents. Portland has successfully used TIF in other urban renewal areas, such as the Pearl District, and can apply similar principles here. The TIF district should be carefully delineated to encompass the target area while avoiding displacement of existing businesses.

Enterprise Zone designation is another powerful tool to consider. Oregon's Enterprise Zone program offers property tax abatement for up to five years on new investments in qualifying areas. This can be particularly attractive for tech startups and manufacturing businesses looking to establish or expand operations in the district. To qualify, businesses must meet job creation and wage requirements, ensuring that the incentives contribute to local economic growth. The city should work with the Oregon Business Development Department to establish an Enterprise Zone that aligns with the revitalization goals.

The New Markets Tax Credit (NMTC) program, administered by the U.S. Treasury, can provide significant capital for larger-scale redevelopment projects. By partnering with Community Development Entities (CDEs), the city can help channel private investment into the area in exchange for federal tax credits. This approach has been successfully used in other post-industrial revitalization projects, such as the Clipper Mill redevelopment in Baltimore.

To support smaller businesses and artisans, a local tax abatement program for historic building rehabilitation should be implemented. This can be modeled after successful programs like Baltimore's Historic Restoration and Rehabilitation Tax Credit, which provides a 10-year tax credit for qualifying renovations. By tying the abatement to adherence to historic preservation standards, this incentive can help maintain the area's industrial character while encouraging adaptive reuse.

Public-private partnerships (P3s) will be crucial for implementing larger infrastructure and development projects. The city should establish a dedicated P3 office to facilitate these arrangements, similar to the West Coast Infrastructure Exchange. This office can help structure deals, negotiate agreements, and ensure that public interests are protected throughout the development process.

One potential P3 model to explore is the creation of a district energy system. By partnering with a private energy company, the city can establish a centralized heating and cooling system that serves multiple buildings, improving energy efficiency and reducing carbon emissions. The Enwave system in Toronto provides a successful precedent for this approach.

Another opportunity for P3 collaboration is in the development of innovative public spaces. The city could partner with local tech companies to create "smart parks" that integrate technology, sustainability, and community engagement. This could include features like solar-powered Wi-Fi hotspots, interactive art installations, and real-time environmental monitoring displays. The High Line in New York City, while not explicitly a P3, demonstrates how creative partnerships can transform industrial infrastructure into vibrant public spaces.

To address affordable housing needs, the city should consider implementing a density bonus program in exchange for the inclusion of below-market-rate units. This can be structured as a public-private partnership, with developers receiving additional building height or floor area ratio in return for dedicating a percentage of units to affordable housing. Seattle's Mandatory Housing Affordability program provides a model for this approach.

The creation of a Business Improvement District (BID) can help fund ongoing maintenance and programming in the revitalized area. Property owners within the district would pay a special

assessment to support services such as street cleaning, security, and marketing. The Pearl District Business Association in Portland offers a local example of how a BID can contribute to neighborhood vitality.

To attract and retain tech startups, the city should partner with local universities and established tech firms to create an innovation district within the revitalized area. This could include shared workspaces, incubators, and accelerator programs. The Cortex Innovation Community in St. Louis provides a successful model for this type of partnership.

Implementing these tax incentives and public-private partnerships will require careful navigation of local, state, and federal regulations. The city should work closely with the Portland Development Commission (now Prosper Portland) to ensure compliance with Oregon's urban renewal laws (ORS Chapter 457) and to develop a comprehensive urban renewal plan that outlines specific projects and funding mechanisms.

It's important to note that while tax incentives can be powerful tools for revitalization, they must be carefully structured to avoid unintended consequences. The city should implement clawback provisions in all incentive agreements to ensure that companies meet their commitments regarding job creation, wage levels, and community benefits. These provisions should be modeled after best practices outlined by the Good Jobs First organization.

Additionally, the city should consider implementing a Community Benefits Agreement (CBA) framework for larger development projects. CBAs are legally binding contracts between developers and community groups that specify the benefits a developer will provide in exchange for community support of the project. This can include commitments to local hiring, affordable housing, environmental sustainability measures, and funding for community programs. The Staples Center CBA in Los Angeles provides a precedent for this approach.

To mitigate potential gentrification concerns, the city should explore the creation of a community land trust (CLT) in partnership with local non-profit organizations. CLTs can help preserve long-term affordability by retaining ownership of the land while selling or leasing the buildings to residents or businesses. The Champlain Housing Trust in Burlington, Vermont, offers a successful model for this approach.

In implementing these strategies, the city must also be mindful of Oregon's strict land use laws, particularly Urban Growth Boundary (UGB) regulations. While the target area is likely within the existing UGB, any expansion or intensification of uses must be carefully evaluated for compliance with statewide planning goals and local comprehensive plans.

The success of these tax incentives and public-private partnerships will depend on clear communication and ongoing engagement with stakeholders. The city should establish a community advisory committee to provide input on the development and implementation of incentive programs. This committee should include representatives from local businesses, residents, community organizations, and subject matter experts.

By strategically combining these tax incentives and public-private partnership models, Portland can create a robust framework for revitalizing the industrial district. This approach can attract investment, preserve industrial heritage, foster innovation, and create a vibrant, sustainable neighborhood that benefits both new and existing community members. The key will be in careful implementation, ongoing monitoring, and a willingness to adapt strategies as the revitalization process unfolds.

VI. Sustainable Energy Solutions

Energy Efficiency Measures:

To maximize energy efficiency, we propose retrofitting existing industrial buildings with high-performance insulation, energy-efficient windows, and smart building management systems. This approach aligns with Portland's Energy Efficient Commercial Construction code (24.85.040), which mandates energy efficiency standards for new construction and major renovations. By exceeding these standards, we can create a competitive advantage for the district.

Specific measures include:

1. Installing LED lighting systems with occupancy sensors and daylight harvesting capabilities.
2. Upgrading HVAC systems to high-efficiency heat pumps and implementing advanced controls for optimal performance.
3. Implementing green roofs and cool roofing materials to reduce heating and cooling loads.
4. Encouraging the use of energy-efficient appliances and equipment in all commercial and residential spaces.

These efficiency measures are expected to reduce energy consumption by 30-40% compared to conventional buildings, aligning with Portland's 2015 Climate Action Plan goal of reducing energy use in buildings by 25% by 2030.

Renewable Energy Generation:

To maximize on-site renewable energy generation, we propose a multi-faceted approach that takes advantage of the district's industrial character and available roof space:

1. Solar PV Arrays: Install large-scale solar photovoltaic systems on warehouse rooftops and parking structures. This aligns with Portland's Solar Energy Code (33.299), which encourages solar energy systems in all zones. We estimate a potential for 5-7 MW of solar capacity across the district.
2. Small-Scale Wind Turbines: Integrate vertical-axis wind turbines into building designs and public spaces, capitalizing on the area's wind patterns. While not explicitly addressed in current zoning codes, these can be permitted under the city's alternative energy systems provisions.
3. Biomass Cogeneration: Establish a district-scale biomass cogeneration plant that utilizes waste from urban agriculture initiatives and local wood waste to produce both heat and electricity. This aligns with Portland's Solid Waste and Recycling regulations (17.102) and promotes circular economy principles.
4. Geothermal Heat Exchange: Implement a district-wide geothermal heat exchange system, leveraging the area's geology to provide efficient heating and cooling. This system can be integrated with the district's stormwater management infrastructure, maximizing resource efficiency.

These renewable energy sources are projected to meet 60-70% of the district's energy demand, significantly reducing reliance on the grid and fostering energy independence.

Smart Grid Integration:

To optimize energy distribution and consumption, we propose implementing a smart microgrid system that integrates renewable energy sources, energy storage, and intelligent demand

management. This approach aligns with Portland's Smart City PDX initiative and can serve as a pilot project for citywide implementation.

Key components of the smart grid system include:

1. **Advanced Metering Infrastructure (AMI):** Install smart meters in all buildings to provide real-time energy consumption data and enable dynamic pricing strategies.
2. **Energy Storage Systems:** Implement a combination of battery storage (e.g., lithium-ion) and thermal storage (e.g., ice storage for cooling) to balance supply and demand and increase grid resilience.
3. **Demand Response Programs:** Develop incentives for businesses and residents to participate in demand response programs, shifting energy consumption to off-peak hours and reducing strain on the grid.
4. **Electric Vehicle (EV) Integration:** Install a network of smart EV charging stations that can act as bidirectional grid resources, allowing vehicles to both draw from and supply power to the grid as needed.
5. **Blockchain-based Energy Trading:** Implement a peer-to-peer energy trading platform using blockchain technology, enabling prosumers (producers and consumers) to trade excess renewable energy within the district.

This smart grid infrastructure will enhance energy efficiency, reduce peak demand, and provide a stable platform for integrating high levels of renewable energy.

Regulatory Alignment and Incentives:

To facilitate the implementation of these sustainable energy solutions, we propose working with city officials to:

1. Establish a Special Energy District overlay zone that provides additional flexibility for renewable energy installations and smart grid infrastructure.
2. Create a Green Energy Fund, financed through a small surcharge on energy bills, to support renewable energy projects and energy efficiency upgrades.
3. Develop a Property Assessed Clean Energy (PACE) financing program to help property owners finance energy efficiency improvements and renewable energy installations.
4. Implement a district-wide carbon pricing mechanism to incentivize low-carbon energy choices and fund additional sustainability initiatives.

These regulatory measures and incentives will accelerate the adoption of sustainable energy solutions and position the district as a leader in urban energy innovation.

Community Engagement and Education:

To ensure the success of these sustainable energy initiatives, we propose:

1. Establishing an Energy Innovation Center that showcases renewable technologies and offers educational programs for residents and visitors.

2. Developing partnerships with local universities and colleges to create internship and research opportunities in sustainable energy fields.
3. Implementing a community energy ambassador program to engage residents in energy-saving behaviors and promote participation in demand response programs.
4. Creating a public dashboard that displays real-time energy production, consumption, and savings data for the district, fostering a sense of community pride and ownership in sustainability efforts.

These engagement strategies will build community support for sustainable energy initiatives and create a culture of energy awareness and conservation.

Economic and Environmental Benefits:

The proposed sustainable energy solutions are expected to yield significant economic and environmental benefits:

1. Energy Cost Savings: Projected annual energy cost savings of \$5-7 million for businesses and residents in the district.
2. Job Creation: Estimated creation of 200-300 direct jobs in renewable energy installation, maintenance, and smart grid management.
3. Carbon Emissions Reduction: Anticipated reduction in annual carbon emissions by 25,000-30,000 metric tons, contributing significantly to Portland's climate action goals.
4. Increased Property Values: Expected increase in property values by 5-10% due to enhanced sustainability features and lower operating costs.
5. Innovation Ecosystem: Attraction of cleantech startups and established companies seeking to leverage the district's advanced energy infrastructure.

These benefits align with Portland's Comprehensive Plan goals for economic prosperity, environmental health, and community resilience.

In conclusion, the proposed sustainable energy solutions for the revitalized industrial district represent a holistic approach to urban energy transformation. By integrating energy efficiency measures, renewable energy generation, and smart grid technologies, we can create a model for sustainable urban development that enhances Portland's reputation as a leader in environmental stewardship and innovation. This comprehensive energy strategy will not only reduce carbon emissions and energy costs but also foster a vibrant, resilient community that attracts forward-thinking businesses and residents.

VII. Urban Agriculture Initiatives

Utilizing the extensive flat rooftops of existing industrial buildings, we propose the installation of rooftop gardens and green roofs. These installations will serve multiple purposes:

1. **Food Production:** Rooftop gardens can yield a variety of vegetables, herbs, and fruits, contributing to local food security and reducing food miles.
2. **Stormwater Management:** Green roofs can absorb up to 70% of rainfall, reducing runoff and alleviating pressure on the city's stormwater infrastructure.
3. **Energy Efficiency:** The added insulation provided by green roofs can reduce heating and cooling costs for buildings by up to 25%.
4. **Air Quality Improvement:** Vegetation on rooftops helps filter air pollutants and reduce the urban heat island effect.

Implementation will involve structural assessments of existing buildings, waterproofing, and the installation of appropriate growing mediums and irrigation systems. We recommend partnering with local urban agriculture organizations to provide expertise and maintenance support.

Community Gardens:

Establishing community gardens in vacant lots and underutilized spaces will foster community engagement and provide access to fresh produce. Key components include:

1. **Raised Beds:** Installing raised beds to ensure soil quality and accessibility for all users.
2. **Tool Sharing Program:** Implementing a communal tool shed and sharing system to reduce individual costs.
3. **Composting Facilities:** Creating on-site composting areas to process organic waste and produce fertilizer for the gardens.
4. **Educational Workshops:** Partnering with local horticultural societies to offer gardening classes and workshops.

These community gardens will be governed by a local committee, ensuring equitable access and maintenance. The Portland Parks & Recreation Department's Community Gardens Program can serve as a model for implementation and management.

Vertical Farming:

To maximize food production in limited space, we propose incorporating vertical farming techniques in both indoor and outdoor settings:

1. **Hydroponic Systems:** Installing hydroponic growing systems in repurposed industrial buildings, allowing for year-round production of leafy greens and herbs.
2. **Aeroponic Towers:** Placing aeroponic growing towers in public spaces and courtyards, serving as both functional food production units and aesthetic elements.
3. **Living Walls:** Integrating edible living walls into building facades and public structures, combining food production with green infrastructure.

These vertical farming initiatives will require partnerships with agricultural technology companies and local universities to ensure proper implementation and ongoing research opportunities.

Urban Orchards and Food Forests:

Transforming underutilized green spaces into productive urban orchards and food forests will provide long-term food resources and enhance biodiversity:

1. **Fruit and Nut Trees:** Planting a diverse range of fruit and nut trees adapted to Portland's climate, such as apple, pear, cherry, and hazelnut.
2. **Understory Planting:** Incorporating berry bushes, herbs, and perennial vegetables to create a multi-layered, productive ecosystem.
3. **Pollinator Habitat:** Integrating native flowering plants to support pollinator populations and enhance overall ecosystem health.

Management of these areas will involve collaboration with local permaculture groups and the Portland Fruit Tree Project to ensure proper care and equitable distribution of harvests.

Aquaponics and Urban Fish Farming:

Leveraging Portland's proximity to water resources, we propose implementing aquaponics systems and urban fish farming:

1. Closed-Loop Systems: Establishing aquaponics facilities that combine fish farming with hydroponic plant production, creating efficient, water-conserving food production systems.
2. Fish Species Selection: Focusing on native and adaptable fish species such as tilapia and trout that thrive in controlled environments.
3. Educational Displays: Incorporating viewing areas and educational displays to engage the public and promote understanding of sustainable food production methods.

These initiatives will require collaboration with aquaculture experts and compliance with Oregon Department of Fish and Wildlife regulations.

Farmers Markets and Distribution Networks:

To support the distribution and sale of locally produced food, we propose:

1. Weekly Farmers Market: Establishing a dedicated farmers market space within the district, prioritizing vendors who produce food within the neighborhood.
2. Farm-to-Table Partnerships: Facilitating connections between urban agriculture initiatives and local restaurants, cafes, and food businesses.
3. Community Supported Agriculture (CSA) Programs: Encouraging the development of CSA programs to provide regular produce deliveries to local residents and businesses.

These distribution networks will be supported by the Portland Farmers Market organization and local business associations.

Waste-to-Resource Systems:

Implementing circular economy principles, we propose systems to convert organic waste into resources for urban agriculture:

1. Neighborhood Composting Program: Establishing centralized composting facilities to process organic waste from households and businesses, producing high-quality compost for urban agriculture initiatives.
2. Biogas Generation: Exploring the potential for small-scale biogas production from organic waste, providing renewable energy for local use.
3. Greywater Recycling: Implementing greywater recycling systems in new developments to provide irrigation for urban agriculture projects.

These systems will require collaboration with Portland's Bureau of Planning and Sustainability and compliance with relevant environmental regulations.

Policy and Zoning Considerations:

To support the implementation of urban agriculture initiatives, we recommend the following policy and zoning changes:

1. Urban Agriculture Overlay Zone: Creating a specific zoning overlay that allows for and encourages urban agriculture activities in the district.
2. Tax Incentives: Providing property tax reductions for landowners who dedicate a portion of their property to food production.
3. Streamlined Permitting: Simplifying the permitting process for urban agriculture projects, including rooftop gardens and aquaponics systems.
4. Urban Agriculture Coordinator: Establishing a dedicated position within the city government to oversee and support urban agriculture initiatives.

These policy recommendations align with Portland's Climate Action Plan and Comprehensive Plan, which emphasize the importance of local food production and sustainability.

Education and Workforce Development:

To ensure the long-term success of urban agriculture initiatives, we propose:

1. Urban Agriculture Training Programs: Partnering with local community colleges and universities to develop vocational training programs in urban agriculture techniques.
2. School Garden Programs: Collaborating with local schools to establish garden programs that integrate food production into curriculum.
3. Internship and Apprenticeship Opportunities: Creating pathways for young people to gain hands-on experience in urban agriculture and related fields.

These educational initiatives will help build a skilled workforce to support the growing urban agriculture sector in Portland.

By implementing these comprehensive urban agriculture initiatives, the revitalized industrial district will become a model for sustainable food production in urban environments. These efforts will not only contribute to local food security and environmental sustainability but also foster community engagement, create jobs, and enhance the overall livability of the neighborhood. The integration of urban agriculture into the fabric of the district will set it apart as an innovative, forward-thinking community that balances industrial heritage with modern, sustainable practices.

VIII. Innovative Public Spaces and Placemaking

Innovative Public Spaces and Placemaking

The revitalization of Portland's declining industrial district presents a unique opportunity to create innovative public spaces that foster community engagement, promote sustainability, and honor the area's industrial heritage. By integrating creative placemaking strategies, we can transform underutilized spaces into vibrant hubs of activity that attract residents, visitors, and businesses alike.

Central to our vision is the creation of a network of interconnected public spaces that serve multiple functions and cater to diverse user groups. We propose converting a series of former warehouses and factory yards into a mix of indoor and outdoor gathering areas, each with its own distinct character and purpose.

The centerpiece of this network will be the "Industrial Commons," a large open-air plaza situated at the heart of the district. This space will be designed to accommodate large-scale events, markets, and performances while also providing flexible seating areas for daily use. The plaza's surface will incorporate permeable pavers and bioswales to manage stormwater runoff, aligning with Portland's green infrastructure goals. Salvaged industrial equipment and machinery will be repurposed as sculptural elements and interactive art installations, celebrating the area's manufacturing history.

Adjacent to the Industrial Commons, we propose establishing an "Innovation Pavilion" within a renovated factory building. This multi-use space will feature a rotating schedule of pop-up exhibitions, workshops, and lectures focused on technology, art, and sustainability. The pavilion will also house a community makerspace equipped with 3D printers, laser cutters, and other tools to support local entrepreneurs and hobbyists.

To enhance connectivity throughout the district, we recommend implementing a "Green Alley" network. These pedestrian-friendly corridors will transform underutilized back alleys into lush, linear parks with native plantings, rain gardens, and energy-efficient lighting. The Green Alleys will not only provide safe and pleasant routes for walking and cycling but also serve as demonstration sites for sustainable urban design practices.

Incorporating elements of tactical urbanism, we propose creating a series of "Parklets" throughout the district. These small-scale interventions will convert parking spaces or unused street corners into miniature parks with seating, planters, and public art. The parklets will be designed as modular, easily movable units, allowing for flexibility and experimentation in their placement and configuration.

To address the need for both active and passive recreation, we suggest developing a "Adventure Playground" on a former industrial lot. This innovative play space will feature repurposed industrial materials and structures, encouraging children to engage in creative, risk-taking play. The playground design will incorporate natural elements and loose parts, fostering imaginative and unstructured play experiences.

In line with Portland's commitment to urban agriculture, we propose establishing a "Community Food Hub" within a renovated warehouse. This facility will combine a year-round farmers' market, community kitchen, and rooftop greenhouse. The Food Hub will serve as a focal point for local food production, education, and distribution, supporting the district's sustainability goals and promoting healthy eating habits.

To celebrate the area's artistic community and create opportunities for public engagement, we recommend implementing a "Street Art Corridor" along a major thoroughfare. This designated stretch will feature large-scale murals, rotating installations, and interactive digital art displays. Local artists will be commissioned to create works that reflect the district's history, diversity, and vision for the future.

Recognizing the importance of accessible green spaces, we propose transforming a former brownfield site into an "Eco-Park." This multi-functional space will combine habitat restoration, stormwater management, and passive recreation opportunities. The park will feature native plantings, interpretive signage, and elevated boardwalks, allowing visitors to explore and learn about local ecosystems.

To support the district's emerging tech sector and provide flexible outdoor workspaces, we suggest creating a network of "Smart Plazas." These digitally-enabled public spaces will offer free high-speed Wi-Fi, charging stations, and interactive information kiosks. The plazas will be equipped with smart lighting and environmental sensors, serving as testing grounds for urban technology innovations.

In developing these public spaces, we will adhere to Portland's zoning code (Title 33) and the Central City 2035 Plan, which emphasizes the creation of vibrant, pedestrian-friendly environments. Specifically, we will comply with Chapter 33.510 (Central City Plan District) and Chapter 33.248 (Landscaping and Screening) to ensure that our proposed spaces meet regulatory requirements and contribute to the city's overall urban design goals.

Our placemaking strategies align with the objectives outlined in Portland's 2035 Comprehensive Plan, particularly Policy 4.32 (Industrial land), which encourages the preservation of industrial land while allowing for adaptive reuse that supports neighborhood livability. By transforming underutilized industrial spaces into dynamic public areas, we are fulfilling this policy while creating new amenities for the community.

To ensure the success of these public spaces, we will implement programming and management strategies based on successful precedents from other cities. For example, we will draw inspiration from New York City's High Line, which transformed an abandoned elevated railway into a popular linear park. The High Line's success in preserving industrial heritage while creating a unique public space aligns closely with our vision for the Portland district.

We will also look to Seattle's Olympic Sculpture Park as a model for integrating art, landscape design, and environmental restoration in a former industrial site. The park's seamless blending of cultural and ecological elements provides valuable lessons for our proposed Eco-Park and Street Art Corridor.

For the Innovation Pavilion and Community Food Hub, we will draw inspiration from Toronto's Evergreen Brick Works, a former brick factory that has been transformed into a community environmental center. The Brick Works' successful integration of adaptive reuse, sustainable design, and community programming offers a blueprint for our own multi-use facilities.

In developing the Green Alley network, we will reference the Chicago Green Alley Program, which has successfully transformed over 300 alleyways into sustainable corridors. Chicago's approach to incorporating permeable pavement, reflective surfaces, and native landscaping will inform our own green infrastructure strategies.

To address potential challenges in implementing these public spaces, we will work closely with the Portland Bureau of Planning and Sustainability to navigate any necessary zoning adjustments or conditional use permits. We will also engage with the Portland Parks & Recreation department to ensure that our proposed spaces complement and enhance the existing parks network.

Funding for these public space initiatives will come from a combination of sources, including city bonds, grants from organizations such as the National Endowment for the Arts and the EPA's Brownfields Program, and public-private partnerships with local businesses and developers. We will also explore the possibility of establishing a Business Improvement District (BID) to provide ongoing funding for maintenance and programming of the public spaces.

To measure the success of our placemaking efforts, we will implement a comprehensive monitoring and evaluation program. This will include regular user surveys, pedestrian counts, and economic impact assessments to gauge the effectiveness of the new public spaces in attracting visitors, supporting local businesses, and improving quality of life for residents.

By creating this network of innovative public spaces, we aim to transform the declining industrial district into a vibrant, sustainable neighborhood that honors its past while embracing the future.

These spaces will serve as catalysts for economic development, social interaction, and environmental stewardship, positioning Portland as a leader in creative urban revitalization.

IX. Affordable Housing and Gentrification Mitigation

Adaptive Reuse for Affordable Housing: Repurposing existing industrial structures for affordable housing creates unique living spaces while preserving the area's character. We recommend converting at least 30% of adaptively reused buildings into affordable housing units. This approach is supported by successful precedents like the Lacey in Philadelphia, where a former factory was transformed into mixed-income apartments.

Community Land Trusts: Establishing a community land trust (CLT) can ensure long-term affordability by removing land from the speculative market. We propose partnering with local nonprofits to create a CLT that acquires and manages properties within the district. This model has proven effective in preserving affordability, as demonstrated by the Proud Ground CLT in Portland, which has helped over 400 families achieve homeownership.

Rent Control and Stabilization: Implementing rent control measures for existing residential properties can protect long-term residents from displacement. We recommend adopting a policy similar to Oregon's statewide rent control law (Senate Bill 608), which limits annual rent increases to 7% plus the consumer price index for buildings older than 15 years.

Mixed-Income Housing Developments: Encouraging mixed-income housing projects can foster socioeconomic integration and reduce stigma associated with affordable housing. We propose incentivizing developers to create projects with a range of unit types and price points, including market-rate, workforce housing, and deeply affordable units. The New Columbia development in Portland serves as a successful model, combining public housing, affordable rentals, and market-rate homes.

Preservation of Existing Affordable Housing: Identifying and preserving naturally occurring affordable housing (NOAH) is essential to maintaining affordability. We recommend creating a NOAH preservation fund to acquire and rehabilitate existing affordable properties, preventing their conversion to market-rate housing. This strategy aligns with Portland's N/NE Neighborhood Housing Strategy, which aims to address displacement in gentrifying areas.

Anti-Displacement Policies: Implementing strong anti-displacement measures can protect vulnerable residents from indirect displacement pressures. We propose adopting a "right to return" policy for residents who have been displaced from the area, similar to Portland's N/NE Preference Policy. Additionally, we recommend establishing a displacement impact assessment requirement for new developments to evaluate and mitigate potential negative effects on existing communities.

Workforce Housing: Addressing the "missing middle" housing needs of moderate-income workers is crucial for maintaining economic diversity. We propose developing workforce housing targeted at households earning 80-120% of AMI, including essential workers, teachers, and public service employees. The Meyer Memorial Trust's Affordable Housing Initiative in Portland provides a model for creating workforce housing through innovative financing and partnerships.

Cooperative Housing Models: Encouraging the development of limited-equity housing cooperatives can provide an affordable homeownership option while fostering community engagement. We recommend partnering with organizations like the National Association of Housing Cooperatives to establish cooperative housing projects within the district.

Accessory Dwelling Units (ADUs): Promoting the construction of ADUs can increase housing density and provide affordable rental options. We propose streamlining the permitting process for ADUs and offering financial incentives for homeowners who agree to rent their ADUs at affordable rates. This aligns with Portland's ADU Program, which has successfully increased housing options in residential neighborhoods.

Community Benefits Agreements: Negotiating community benefits agreements (CBAs) with developers can ensure that new projects contribute to affordable housing and community needs. We recommend requiring CBAs for large-scale developments, including provisions for affordable housing units, local hiring, and community amenities.

Land Value Capture: Implementing a land value capture mechanism can help fund affordable housing initiatives. We propose adopting a tax increment financing (TIF) district specifically for affordable housing, capturing a portion of the increased property values resulting from public investments in the area.

Tenant Protections: Strengthening tenant protections can help prevent displacement and maintain community stability. We recommend adopting policies such as just cause eviction standards, relocation assistance requirements, and extended notice periods for no-cause evictions, similar to Portland's Mandatory Renter Relocation Assistance Ordinance.

Affordable Homeownership Programs: Creating pathways to homeownership for low and moderate-income residents can build long-term community wealth. We propose establishing a down payment assistance program and partnering with community development financial institutions (CDFIs) to offer low-interest mortgages for first-time homebuyers.

Affordable Commercial Space: Preserving affordable commercial space is crucial for supporting local businesses and preventing commercial gentrification. We recommend implementing a program similar to San Francisco's Community Opportunity to Purchase Act (COPA), giving qualified nonprofit organizations the right of first offer on commercial properties for sale.

Anti-Speculation Measures: Implementing policies to discourage speculative real estate practices can help stabilize property values and prevent rapid gentrification. We propose adopting a vacancy tax on underutilized properties and implementing a flip tax on properties resold within a short timeframe.

Monitoring and Evaluation: Establishing a robust monitoring and evaluation system is essential for tracking the effectiveness of affordability and anti-gentrification measures. We recommend creating a neighborhood stabilization index to measure key indicators such as demographic changes, housing costs, and displacement rates.

These strategies, when implemented comprehensively, can create a framework for equitable development that balances revitalization with affordability and community preservation. By prioritizing affordable housing and proactively addressing gentrification concerns, the redeveloped industrial district can become a model for inclusive urban regeneration in Portland and beyond.

X. Implementation Timeline and Cost Projections

During this initial phase, we will focus on finalizing the master plan, securing necessary approvals, and laying the groundwork for implementation. Key activities include:

1. Conduct detailed site assessments and environmental studies
2. Engage in extensive community outreach and stakeholder consultations
3. Finalize zoning changes and obtain city council approval
4. Develop detailed design guidelines for adaptive reuse projects
5. Establish a public-private partnership framework
6. Secure initial funding commitments from public and private sources

Estimated cost for Phase 1: \$5-7 million

Phase 2 (Years 3-4): Infrastructure and Public Space Development

This phase will focus on upgrading existing infrastructure and creating key public spaces to catalyze private investment:

1. Implement green stormwater management systems, including bioswales and permeable pavements
2. Upgrade utilities to support increased density and mixed-use development
3. Develop the central public plaza and community garden spaces
4. Create a network of pedestrian and bicycle pathways
5. Install sustainable energy infrastructure, such as solar-powered street lighting
6. Begin adaptive reuse of select industrial buildings for community use

Estimated cost for Phase 2: \$50-70 million

Phase 3 (Years 5-7): Major Redevelopment and Adaptive Reuse

This phase will see the most significant transformation of the district:

1. Launch large-scale adaptive reuse projects, converting industrial buildings into mixed-use spaces
2. Develop new affordable housing units
3. Create incubator spaces for tech startups and artisan workshops
4. Implement urban agriculture initiatives, including rooftop gardens and vertical farming
5. Construct sustainable energy generation facilities (e.g., community solar farm)
6. Develop innovative public spaces, such as the elevated linear park

Estimated cost for Phase 3: \$200-250 million

Phase 4 (Years 8-10): Refinement and Expansion

The final phase will focus on completing the transformation and ensuring long-term sustainability:

1. Complete remaining adaptive reuse and new construction projects
2. Expand public transportation options, including potential streetcar extension
3. Implement advanced smart city technologies for energy management and public services
4. Develop additional affordable housing units to meet ongoing demand
5. Expand urban agriculture initiatives
6. Conduct comprehensive evaluation of project outcomes and make necessary adjustments

Estimated cost for Phase 4: \$150-200 million

Total estimated project cost over 10 years: \$405-527 million

This phased approach aligns with established urban planning principles and precedents, such as the successful revitalization of the Pearl District in Portland and the High Line project in New York City. The timeline allows for flexibility and adaptation based on market conditions, community feedback, and emerging technologies.

Cost projections are based on similar urban redevelopment projects and take into account Portland's specific market conditions. The wide range accounts for potential variations in construction costs, land acquisition, and unforeseen challenges. It's important to note that these costs will be distributed among various public and private entities, including the city government, developers, and community organizations.

Funding sources for this project will include:

1. Tax Increment Financing (TIF): Utilizing Portland's well-established TIF program to capture increased property tax revenue for reinvestment in the district.
2. Public-Private Partnerships: Leveraging private investment to complement public funding, particularly for adaptive reuse projects and new construction.
3. Federal and State Grants: Pursuing available funding for sustainable development, affordable housing, and brownfield remediation.
4. Green Bonds: Issuing municipal bonds specifically for sustainable infrastructure and energy projects.
5. Community Development Block Grants (CDBG): Utilizing federal CDBG funds for community facilities and affordable housing.
6. New Market Tax Credits: Attracting investment in commercial and mixed-use projects through this federal program.

The implementation timeline and cost projections adhere to Portland's Comprehensive Plan (2035) and the Climate Action Plan, ensuring alignment with the city's long-term goals for sustainable development and climate resilience. Specifically, this project supports Policy 6.3 of the Comprehensive Plan, which calls for the preservation of industrial land while allowing for adaptive reuse that supports the evolution of industrial areas.

To mitigate gentrification concerns, the plan incorporates affordable housing development throughout all phases, in line with Portland's Inclusionary Housing policy. This policy requires that new residential developments with 20 or more units must include a percentage of affordable units or pay a fee-in-lieu.

The phased approach also allows for continuous monitoring and adjustment of the plan to ensure it meets community needs and addresses any emerging issues. Regular community meetings and progress reports will be scheduled throughout the implementation process to maintain transparency and gather ongoing feedback.

In terms of urban planning codes, the project will require amendments to the current zoning regulations to allow for mixed-use development in the industrial district. This can be achieved through the creation of a Special Planning District or an overlay zone, similar to the Central Eastside Industrial District Mixed Use Overlay Zone (33.510).

The implementation plan also considers the potential need for brownfield remediation, given the area's industrial history. The timeline and budget allocate resources for environmental assessments and cleanup efforts, in compliance with Oregon Department of Environmental Quality regulations and the EPA's Brownfields Program guidelines.

To ensure the success of the adaptive reuse projects, the plan will adhere to the Secretary of the Interior's Standards for Rehabilitation, which provide guidelines for preserving historic structures while allowing for compatible new uses. This approach has been successfully employed in other industrial revitalization projects, such as the Ford Assembly Building in Richmond, California.

The sustainable energy solutions proposed in the plan will need to comply with Portland's Green Building Policy and the Oregon Energy Code. The plan anticipates potential changes in energy regulations over the 10-year implementation period and includes flexibility to adapt to more stringent requirements.

For urban agriculture initiatives, the plan will leverage Portland's Progressive Urban Agriculture Zoning Code, which allows for a wide range of agricultural activities in residential and commercial zones. The proposed rooftop gardens and vertical farming projects will need to comply with building codes and safety regulations, including those outlined in the Portland Ecoroof Program.

The implementation timeline also accounts for the necessary environmental review processes, including the preparation of Environmental Impact Statements as required by the National Environmental Policy Act (NEPA) for projects receiving federal funding.

To track the progress and success of the revitalization effort, key performance indicators (KPIs) will be established and monitored throughout the implementation process. These KPIs will include:

1. Number of adaptive reuse projects completed
2. Square footage of new mixed-use development
3. Number of affordable housing units created
4. Job creation and retention figures
5. Increase in property values and tax revenue
6. Reduction in carbon emissions and energy consumption
7. Amount of green space and public amenities added
8. Number of new businesses, particularly in target sectors (tech, artisan)
9. Community satisfaction ratings

Regular reporting on these KPIs will help demonstrate the project's success to stakeholders and justify ongoing investment and support.

In conclusion, this implementation timeline and cost projection provide a realistic and flexible framework for transforming the declining industrial district into a vibrant, eco-friendly neighborhood. By adhering to established urban planning principles, leveraging successful precedents, and complying with relevant regulations, the plan sets the stage for a sustainable and community-focused revitalization effort that can serve as a model for similar projects across the United States.