

# Maximize the benefits of urban trees.

San Francisco's trees do much more than beautify our streets. They provide a wide range of important social, economic and environmental benefits. Although trees work hard everyday - cleaning the air, storing carbon and providing habitat - they are rarely recognized or valued for the services they provide. The Plan recommends maximizing the benefits of urban trees and making them more visible to policymakers and the public.

Street trees should be recognized for their ability to help achieve targeted environmental and public health goals. The City should identify which species perform best at providing various ecosystem and social services (i.e. intercepting stormwater or removing air pollutants). This information can be used by forest managers and property owners to more carefully select and plant trees, thereby maximizing the benefits most relevant to the city including:

- Improved Air Quality
- Stormwater Retention
- Enhanced Public Health
- Biodiversity & Habitat Creation
- Carbon Sequestration
- Support Local Economy



**MAKING BENEFITS VISIBLE**  
Using signage to identify the many benefits provided by trees is one way to increase awareness of their value and build support for the urban forest.



*Arbutus unedo*



# Grow the street tree population by 50% - *50,000 new street trees.*

The Plan calls for planting an additional *50,000 new street trees* on San Francisco's streets over the next 20 years. This will expand the city's street tree population by half (50%) from 105,000 street trees (2014) to 155,000 street trees (2034) - approximately 2,500 new trees per year. These new trees will help stem the decline of the urban forest and bring the many benefits of trees to more of the city's neighborhoods. In addition, they will help create a more equitable distribution of tree canopy and reduce greening inequities in different areas of the city. An associated funding and maintenance program is needed to carry out this expanded street tree planting program and ensure the long-term health of new trees.

2014

105,000

TOTAL  
*street trees*



50,000 NEW TREES

2034

155,000

TOTAL  
*street trees*





# Establish and fund a citywide street tree maintenance program.

Cities recognized as urban forestry leaders - Santa Monica, Sacramento, Minneapolis, New York and Chicago - all manage and maintain their city's street trees. Privately maintained street trees generally fare worse than publicly maintained trees. The current practice of transferring maintenance responsibility<sup>1</sup> for street trees to private property owners should stop. The Plan recommends centralizing maintenance for 100% of San Francisco's street trees under the Department of Public Works through a fully funded municipal street tree program.

A comprehensive maintenance program for the city's 105,000 street trees would benefit both property owners and the broader public. Under such a program, homeowners would be relieved from the responsibility for maintaining trees fronting their property and making tree-related sidewalk repairs. City residents and visitors would also see significant growth of the urban forest over time. A major reason so few trees are currently planted in San Francisco is because no maintenance program exists to care for them afterwards.

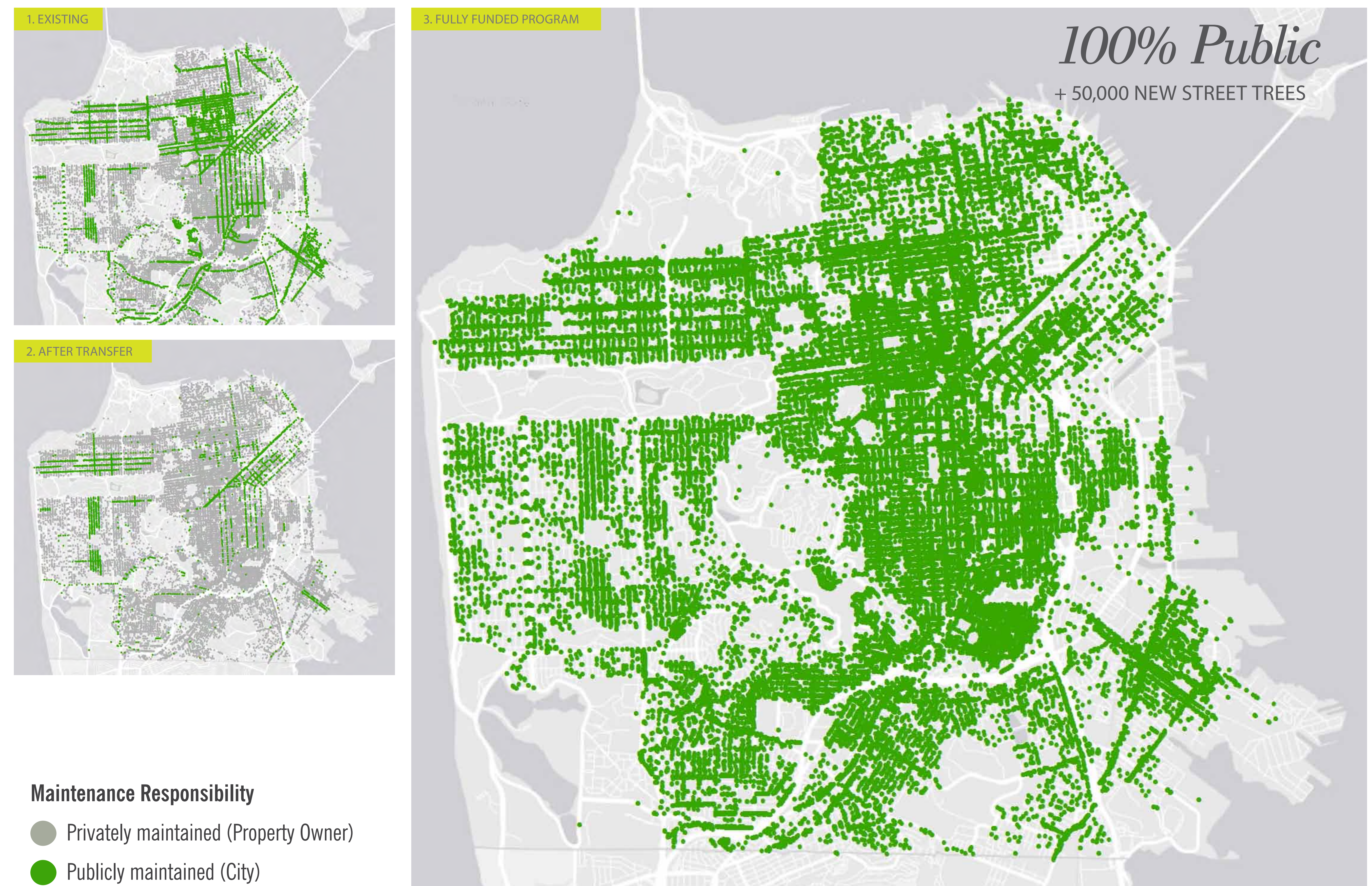
Creating a citywide street tree maintenance program would require the City to get serious about establishing long-term funding for our trees. A recent Street Tree Finance Study<sup>2</sup> identified a variety of funding options for consideration by decision-makers. The Study outlined possible funding tools including an assessment district, parcel tax, general obligation bonds and others. These tools should be further evaluated for their feasibility and potential to achieve Plan goals.

## STREET TREE MAINTENANCE IN SAN FRANCISCO

**1. EXISTING:** Maintenance of San Francisco's 105,000 street trees is divided in a confusing patchwork between the Department of Public Works (green) and private property owners (dark gray).

**2. AFTER TRANSFER:** Due to ongoing budget cuts, DPW is in the process of transferring the bulk of street tree maintenance responsibility to fronting property owners.

**3. FULLY FUNDED PROGRAM:** The Plan explores reversing this trend. It recommends pursuing funding mechanisms that would allow the City to assume maintenance responsibility for 100% of San Francisco's street trees, achieve a healthier urban forest and plant and maintain an additional 50,000 new street trees.

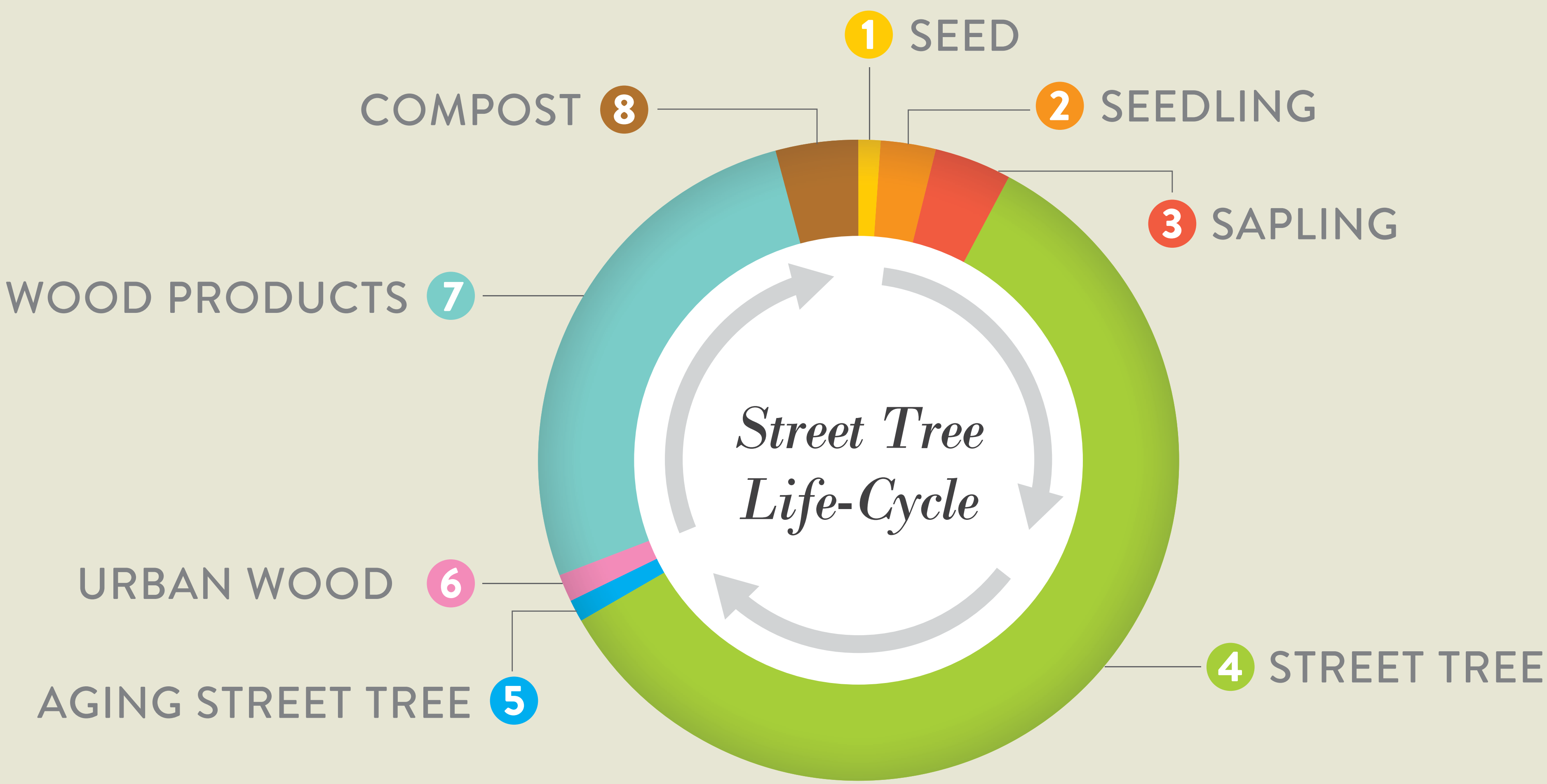


<sup>1</sup> In response to recurring budget cuts leaving DPW with inadequate resources to sustain maintenance operations, the agency announced a seven-year Tree Maintenance Transfer Plan (2011). Under the transfer plan, DPW will relinquish responsibility for approximately 24,000 street trees currently under its care to adjacent private property owners. This will make property owners responsible for services previously provided by the City including tree pruning and sidewalk repair.

<sup>2</sup> AECOM (2012). *Financing San Francisco's Urban Forest: The Costs & Benefits of A Comprehensive Municipal Street Tree Program*.



# Manage trees throughout their entire life-cycle ...from seeds to stumps and trees to tables.

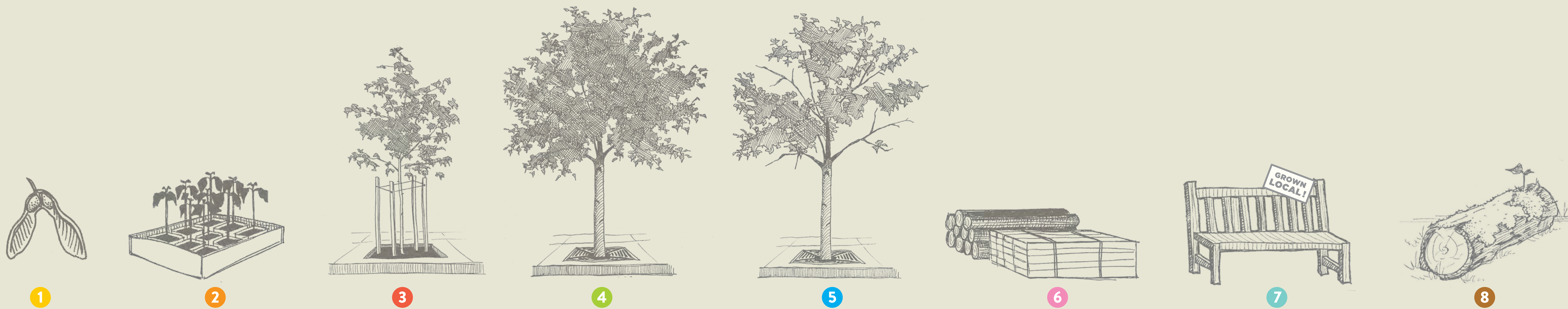


**Components of the proposed Street Tree Life-Cycle Management Program include:**

**1 Street Tree Nursery**  
San Francisco's street trees currently come from a range of commercial growers around the region and state. This system involves the transportation costs associated with tree delivery and presents challenges to finding uncommon species at commercial nurseries. The establishment of a Street Tree Nursery in San Francisco would allow for the growing of some street trees locally through a City and community partnership that creates green jobs, education and skill development opportunities.

**5 Tree Removal & Succession Plantings**  
A healthy urban forest reduces the occurrence of mass tree removals due to hazards, disease, or death. Aging or diseased trees should be identified for removal before death to prevent potential hazards. Succession plantings should be carried out to stabilize tree canopy, ensure age diversity and achieve no net loss to the urban forest.

**6 Urban Timber Harvest & Wood By-Products**  
The large quantity of wood removed from city streets holds tremendous potential for re-use and to help achieve the City's "Zero Waste" goals. Trees removed from streets and development sites are often chipped for mulch or landfilled. Some travel long distances for disposal. Alternatively, the city's wood waste can provide material for second-life products such as furniture, building materials, paper, art and biomass energy. Processing of urban wood at local mills for re-use can also extend the life of urban trees while retaining their stored carbon.



Street Tree Nursery		City Streets			Local Lumber Mill	Artisans & Woodworkers	Street Tree Nursery
SEED	SEEDLING	SAPLING	STREET TREE	AGING STREET TREE	URBAN WOOD	WOOD PRODUCTS	COMPOST
The creation of a Street Tree Nursery in San Francisco would allow for the sprouting and growing of trees locally in our natural climate near the streets they will live out their mature lives. Growing more trees in the city would also reduce the impact of importing trees from commercial nurseries miles away.	Tree seedlings would be grown at the Street Tree Nursery and tended through partnerships with youth and community organizations. These young trees would receive watering, transplanting and fertilizing during the three years it takes for saplings to reach street-ready stature.	Once a sapling reaches 6 feet tall, it would become ready for planting. For most species, a strong central leader is a forecast of street tree health. The planting of new trees would be carried out on city streets by residents, the Department of Public Works and Friends of the Urban Forest.	Street trees serve San Francisco's streets for up to 70 years or more – greening the city, sequestering carbon, creating habitat and providing other benefits. To ensure a long and healthy life, they would receive regular maintenance and pruning under a adequately funded citywide street tree maintenance program.	Once street trees reach the end of their lives or are removed, they should be replaced to minimize canopy and benefits loss. Successional planting plans should be developed for areas with large numbers of overmature trees so the urban forest can be replenished as trees age out.	Instead of being sent to a landfill, burned or fed through a chipper, timber-viable street trees could be transformed into high quality lumber at a local mill. Lower-quality wood waste could be captured for use in particle board, paper products, mulch and biomass-based power and heat production.	By turning urban wood into second-life products such as furniture, building materials and artwork, the City can celebrate the beauty and value of this precious natural resource while helping achieve Zero Waste goals. Wood products extend the life of an urban tree and prevent the carbon dioxide stored in wood from being released into the atmosphere.	Urban wood unsuitable for second-life products or other uses is composted at the Street Tree Nursery to provide fertilizer for the seeds of new street trees.