

Capstone Project

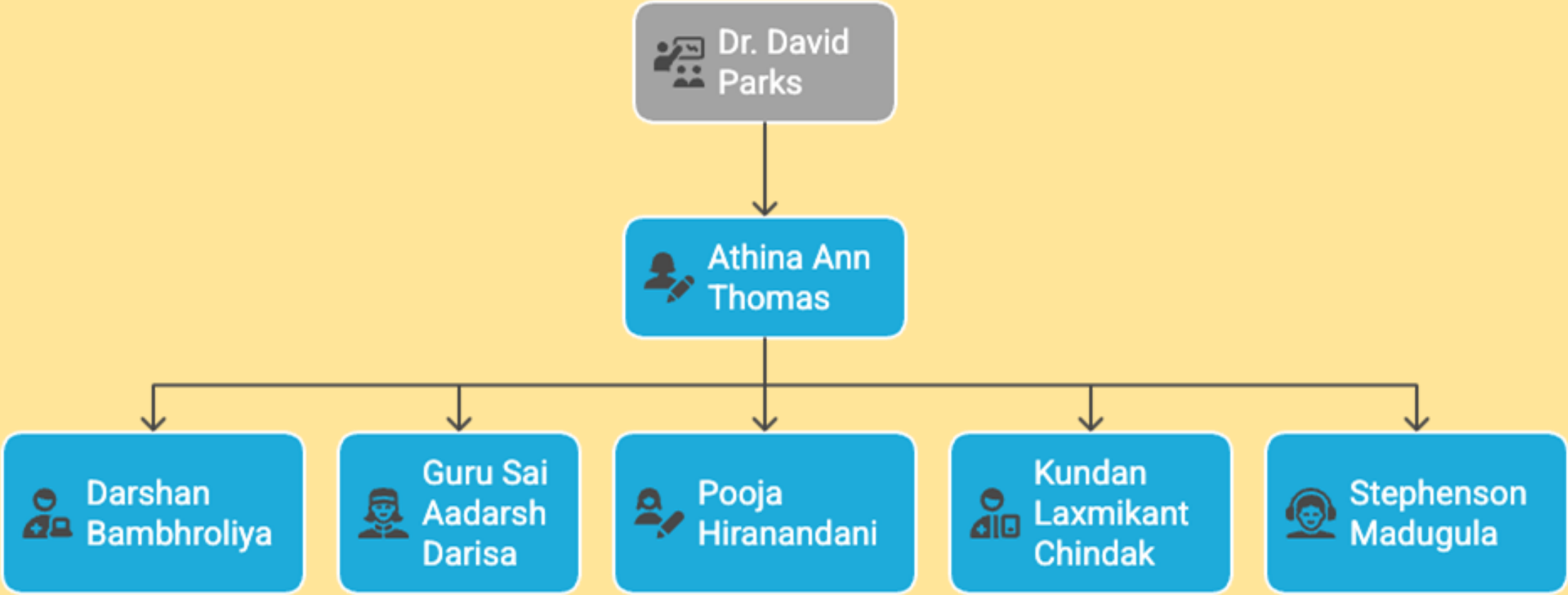
Integrated Research and Development

DART Silver Line Property Value Analysis

University of Texas at Dallas | 2025



Team Structure and Roles



Presentation Overview



Project Overview

Transit-Oriented Investment Strategies



Focus on properties near transportation infrastructure

Strategic Investment Opportunities



Seeking investments related to DART Silver Line

Data Analytics



Utilizing data for investment decisions



High-Potential Property Identification

Identifying properties with growth potential

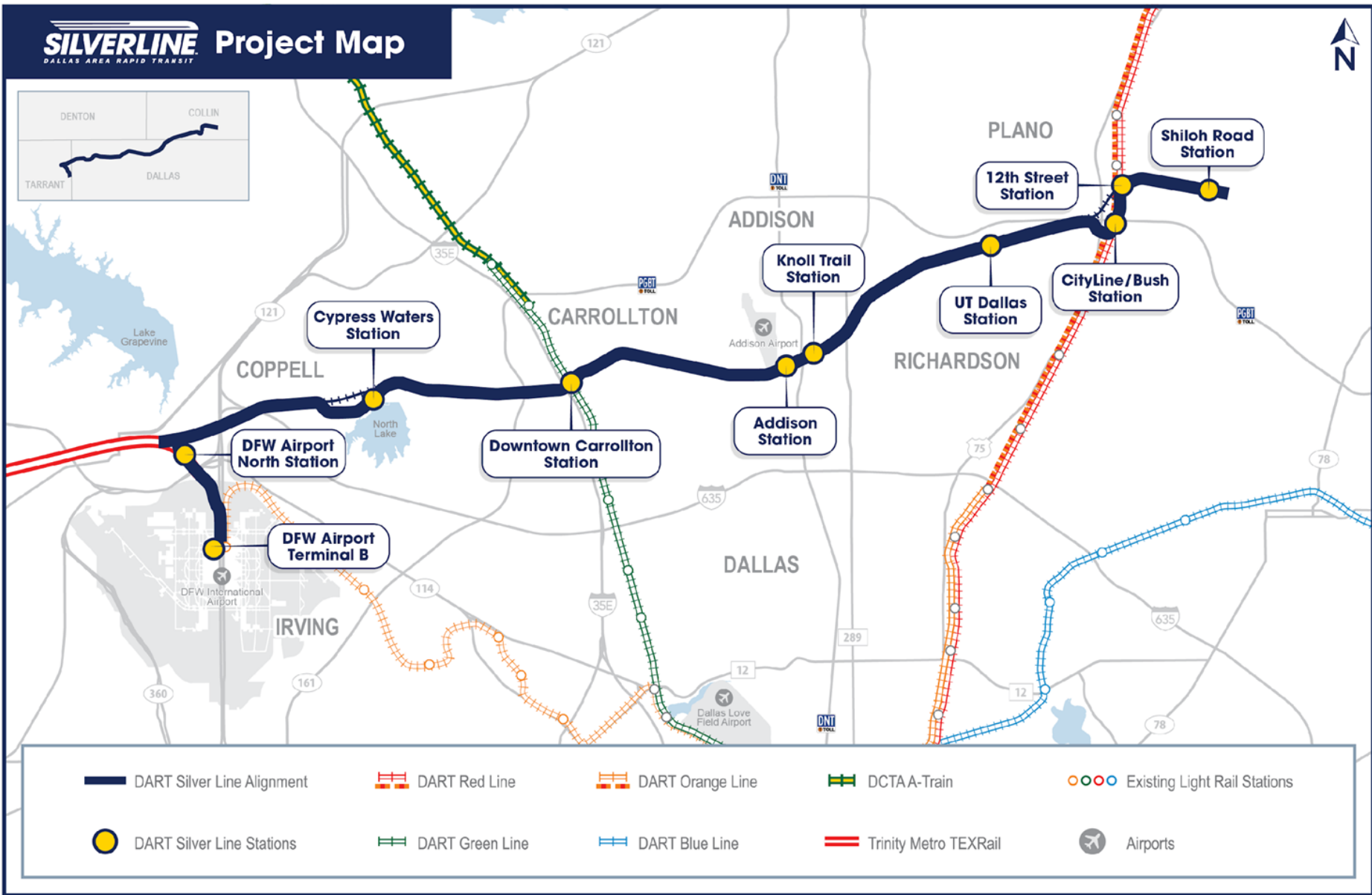


Property Value Growth

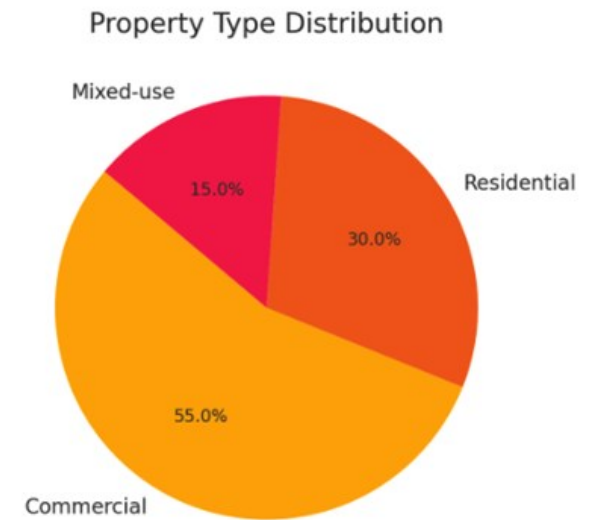
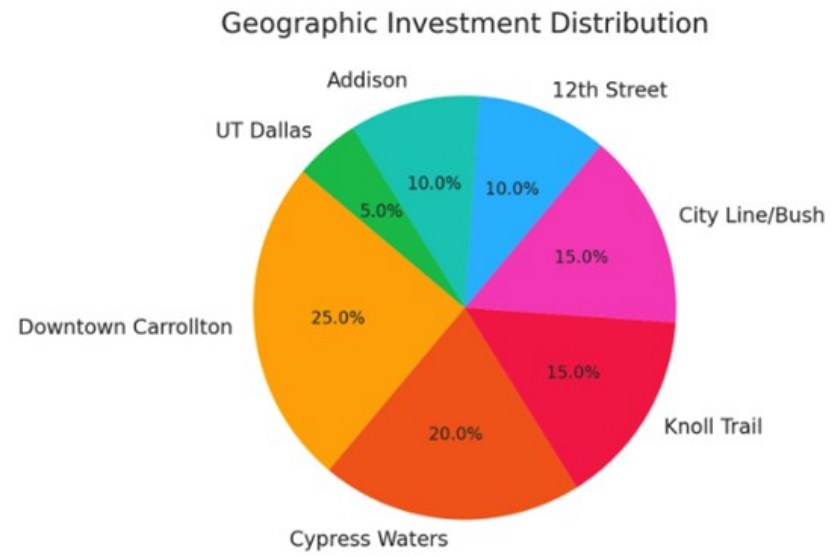
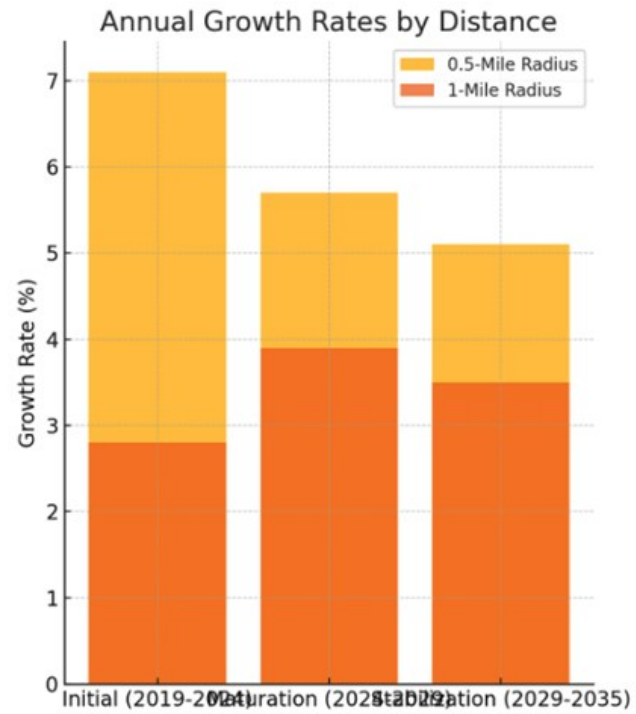
Achieving substantial property value increases

SILVERLINE Project Map

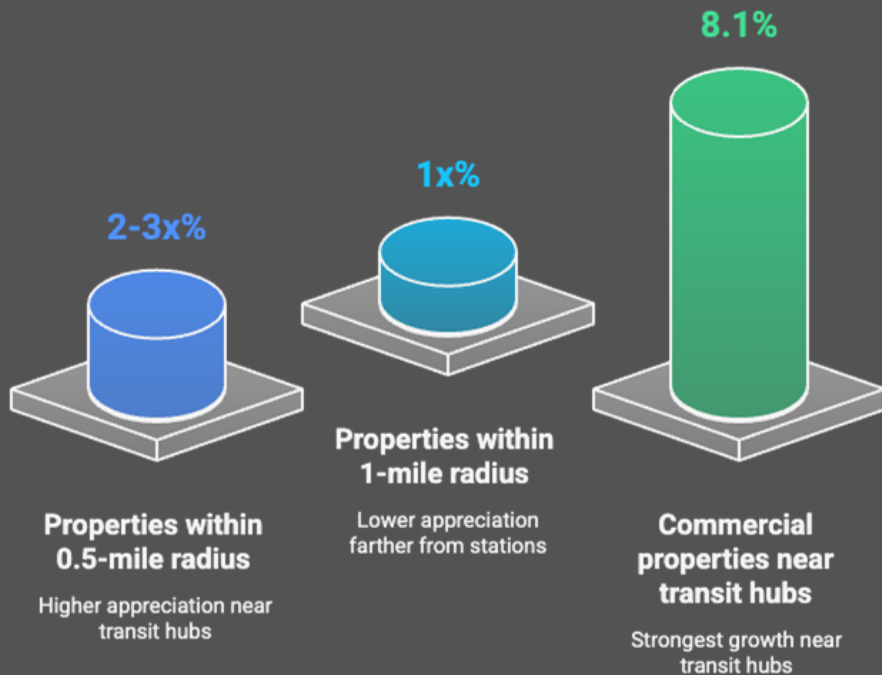
DALLAS AREA RAPID TRANSIT



- DART Silver Line Alignment
- DART Red Line
- DART Orange Line
- DCTAA-Trains
- Existing Light Rail Stations
- DART Silver Line Stations
- DART Green Line
- DART Blue Line
- Trinity Metro TEXRail
- ✈ Airports



Executive Summary



- **Project Scope:** Analysis of property value trends around seven DART Silver Line stations
- **Time Period:** Historical data (2019-2024) and projections (2025-2035)
- **Key Finding:** Properties within 0.5-mile radius show 2-3x higher appreciation than 1-mile radius
- **Commercial Properties:** Demonstrate strongest growth near transit hubs (annual rates up to 8.1%)
- **Growth Phases:** Initial rapid growth (2019-2024), maturation (2024-2029), stabilization (2029-2035)
- **Recommendation:** Diversified investment approach across stations and property types

Project Background and Objectives

- Continuation of ITRD's evaluation of transit-oriented development opportunities
- Focus on DART Silver Line stations and surrounding property values
- Implementation of advanced data analytics for transportation planning
- Extended scope to include 10-year property value projections (2025-2035)
- **Primary Objectives:**
 - Analyze impact on commercial and residential property values
 - Support investor decisions through market analysis
 - Forecast property valuation trends through 2035
 - Identify optimal investment opportunities

Business Problem

Challenges for Transit-Oriented Investment:

- Limited understanding of differential impact at varying distances from stations
- Insufficient historical data analysis to establish reliable growth patterns
- Lack of forward-looking projections accounting for changing urban development
- Absence of comparative analysis between commercial and residential properties
- Inadequate tools for visualizing investment potential across station areas

Goal: Provide comprehensive analysis to enable informed investment decisions

Project Scope

Within Scope:

- Analysis of historical property values (2019-2024) for seven stations
- Projection models forecasting values from 2025-2035
- Comparative analysis of 0.5-mile vs. 1-mile radius properties
- Evaluation of different property types (commercial, residential, mixed-use)
- Investment recommendations based on projected growth patterns

Outside Scope:

- Properties beyond 1-mile radius
- Engineering assessments of specific properties
- Legal/zoning compliance reviews
- Environmental impact assessments
- Financing options for investments

Methodology

Data Collection

Sources:

- County Appraisal District records (2019-2024)
- Tax assessment data for commercial and residential properties
- Market transaction records
- Land valuation separate from improvement valuations

Geographic Information:

- Precise station locations and boundaries
- Property boundaries within study radii
- Road networks and accessibility features
- Zoning and land use designations

• Analysis Techniques

Spacial Trends:

- Identification of property clusters with similar growth patterns
- Analysis of proximity effects on value appreciation

Statistical Analysis:

- Time series analysis of property values
- Calculation of Compound Annual Growth Rates (CAGR)
- Comparative methods for 0.5-mile vs. 1-mile radius growth

Forecasting Models:

- Regression-based forecasting
- Growth rate projection based on past trends

Station Specific

• Knoll Trail Station

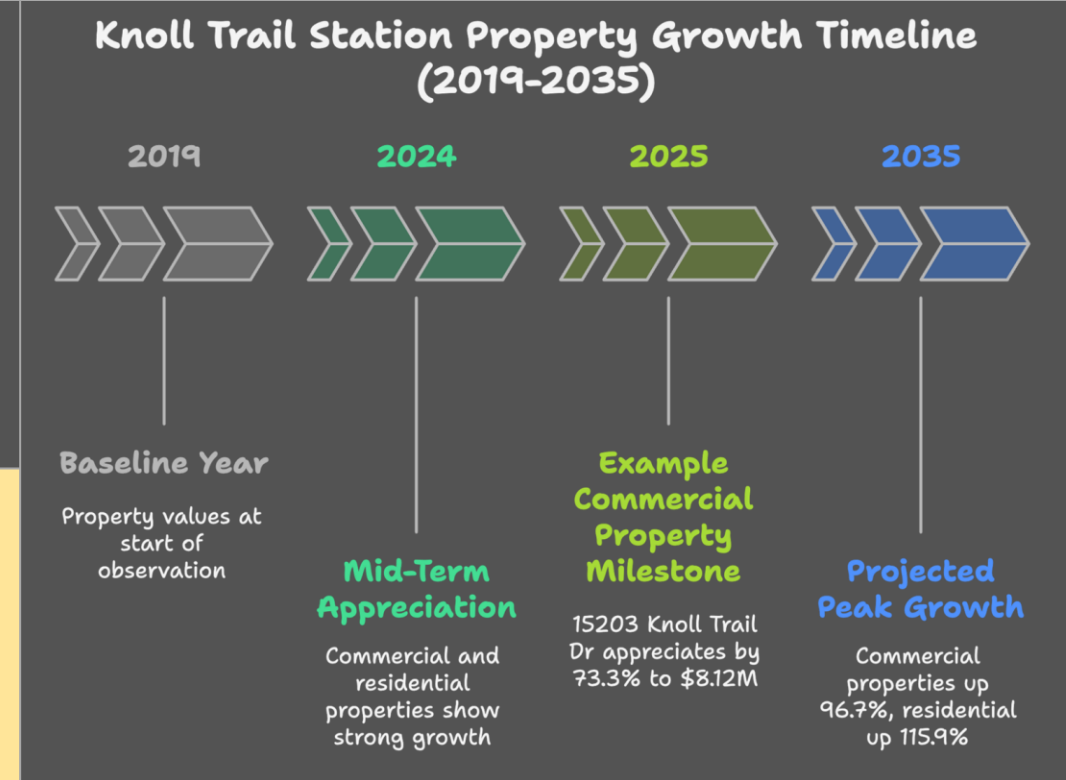
Historical Trends (2019-2024):

- Commercial properties showed strong, consistent appreciation
- Example: 15203 Knoll Trail Dr - 73.3% increase by 2025 (\$8.12M)
- Residential properties with significant growth (93.6% for 15306 Trails End Dr)

Future Projections (2025-2035):

- 0.5-mile radius: Commercial properties maintain 7.0% annual growth
- Projected total growth of 96.7% by 2035
- Residential properties show even stronger potential (115.9% by 2035)

Key Growth Factors: Transit-oriented development, commercial clustering, infrastructure improvements



Station-Specific Analysis

Addison Station

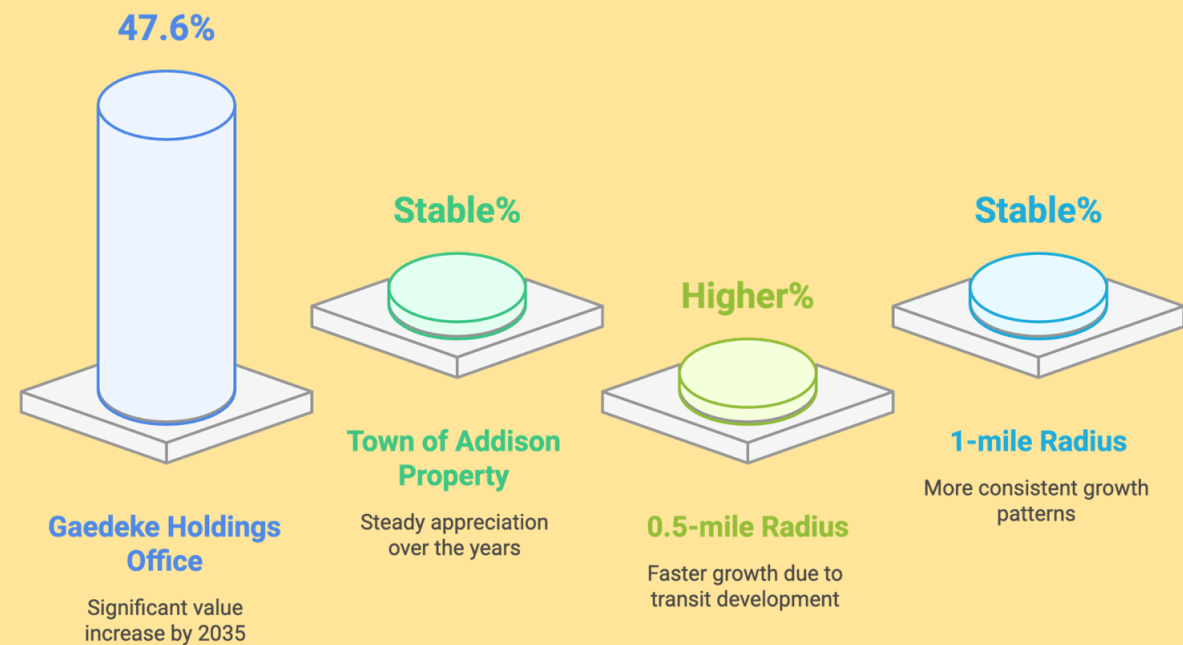
- **Historical Trends (2019-2024):**

- Steady growth driven by transit-oriented development
- Strategic location along Dallas North Tollway
- Stable commercial district with established patterns

- **Future Projections (2025-2035):**

- Gaedeke Holdings' office building: 47.6% increase in total value by 2035
- Steady appreciation for Town of Addison Property
- Higher growth rates in 0.5-mile radius vs. more stable patterns in 1-mile radius

- **Key Growth Factors:** Transit-oriented development, strategic location, planned infrastructure improvements



Station-Specific Analysis

Cypress Waters Station

Historical Trends (2019-2024):

- One of the strongest performing areas in the DART Silver Line system
- Driven by corporate relocations and limited housing supply
- Residential properties within 0.5-mile radius showing impressive growth

Future Projections (2025-2035):

- Residential properties: Projected land value growth up to 121%
- Commercial properties: More moderate growth (67% land value increase)
- Three distinct growth phases identified

Key Growth Factors: Corporate presence, limited supply, infrastructure development, mixed-use integration

Cypress Waters Station Growth Overview

Historical Trends

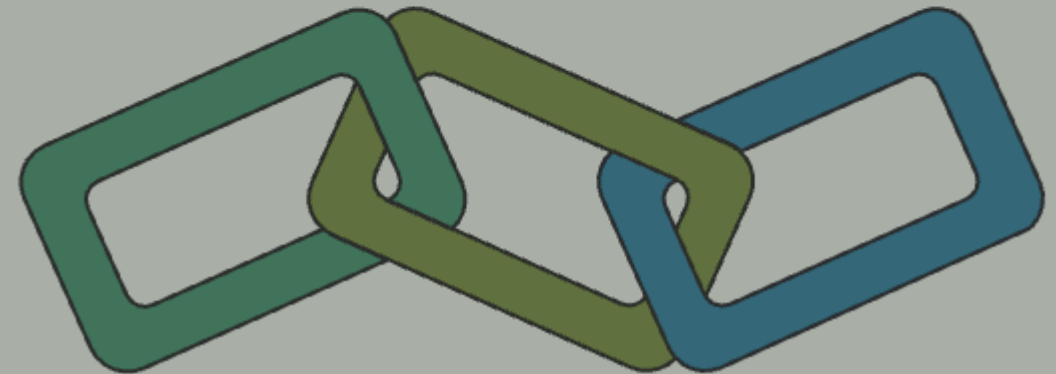
Past performance driven by corporate relocations and limited housing

Future Projections

Anticipated growth in residential and commercial properties

Key Growth Factors

Elements influencing future growth, including corporate presence and infrastructure



Growth Projections for Cypress Waters Station

Limited Housing Supply

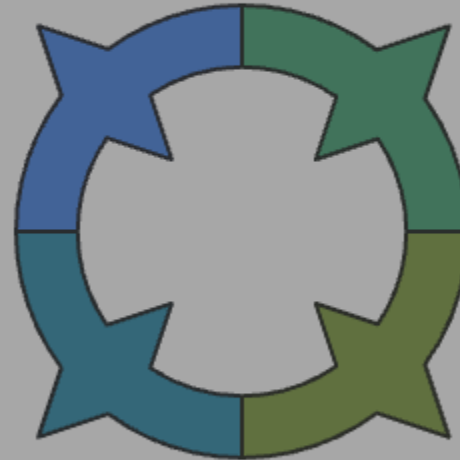
Limited housing supply fuels high growth in residential properties.

Residential Properties

Infrastructure Development

Infrastructure development supports moderate growth in residential areas.

High Growth



Moderate Growth

Corporate Relocations

Corporate relocations drive high growth in commercial properties.

Commercial Properties

Mixed-Use Integration

Mixed-use integration contributes to moderate growth in commercial spaces.

Station-Specific Analysis

- **City Line/Bush Station**

Historical Trends (2019-2024):

- Dynamic area with volatile property values
- Influenced by major employers (Texas Instruments)
- 0.5-mile radius showed strong growth (7.2% annually)

Future Projections (2025-2035):

- Commercial properties in 0.5-mile radius: Up to 156% increase by 2035
- Growth rates expected to moderate from 7.2% to 5.3% by 2029-2035
- 1-mile radius shows accelerating growth patterns (2.5% to 4.5%)

Key Growth Factors: Transit connectivity, major employer influence, infrastructure upgrades

Station-Specific Analysis

• **Downtown Carrollton Station**

Historical Trends (2019-2024):

- Substantial growth followed by market correction
- Mature transit-oriented development zone
- Residential properties showed impressive land value growth (114.3%)

Future Projections (2025-2035):

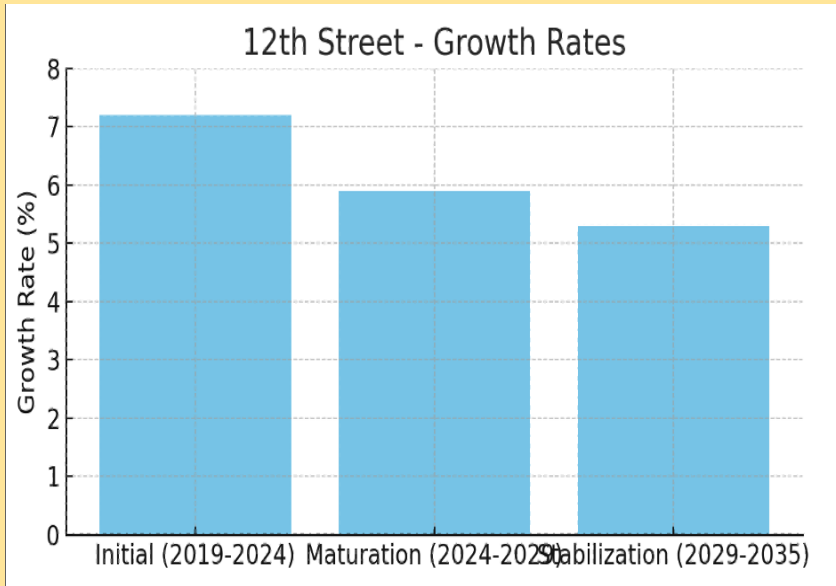
- Residential properties in 0.5-mile radius: 259% increase in land value by 2035
- Commercial properties: Even stronger projected growth (298% by 2035)
- Growth rates gradually moderating as market matures

Key Growth Factors: Mature TOD implementation, enhanced accessibility, commercial clustering

Station-Specific Analysis

12th Street Station

- **Historical Trends (2019-2024):**
 - Significant growth driven by retail and infrastructure upgrades
 - Commercial properties showing 8.1% annual growth
- **Future Projections (2025-2035):**
 - Commercial properties in 0.5-mile radius: Up to 156% increase by 2034
 - Overall growth ranges from 21.4% to 599.9% depending on property type
 - Growth rates projected to moderate from 8.1% to 5.3% by 2034
- **Key Growth Factors:** Commercial intensification, infrastructure enhancements, transit connectivity



The 12th Street Station area demonstrates classic transit-oriented development patterns, with property values showing significant appreciation waves that gradually moderate as the market matures. By 2035, the area is projected to be a well-established mixed-use district with property values 75-600% higher than 2019 levels, depending on proximity to transit and property type.

Comparative Analysis Between Radii (12th street station):

| Factor | 0.5 Mile Radius | 1 Mile Radius |
|----------------------------|-----------------------------|------------------------------|
| 2019-2024 Growth | High (40-310%) | Moderate (14%) |
| 2024-2029 Projected Growth | 30-35% | 22-28% |
| 2029-2034 Projected Growth | 25-32% | 20-25% |
| Primary Property Type | Commercial | Mixed Commercial/Residential |
| Development Focus | Transit-oriented commercial | Balanced mixed-use |

Station-Specific Analysis

- **UT Dallas Station**

- **Historical Trends (2019-2024):**

- Station property showed no growth while surrounding residential properties appreciated
- Residential properties experienced 5.44% to 5.79% CAGR

- **Future Projections (2025-2035):**

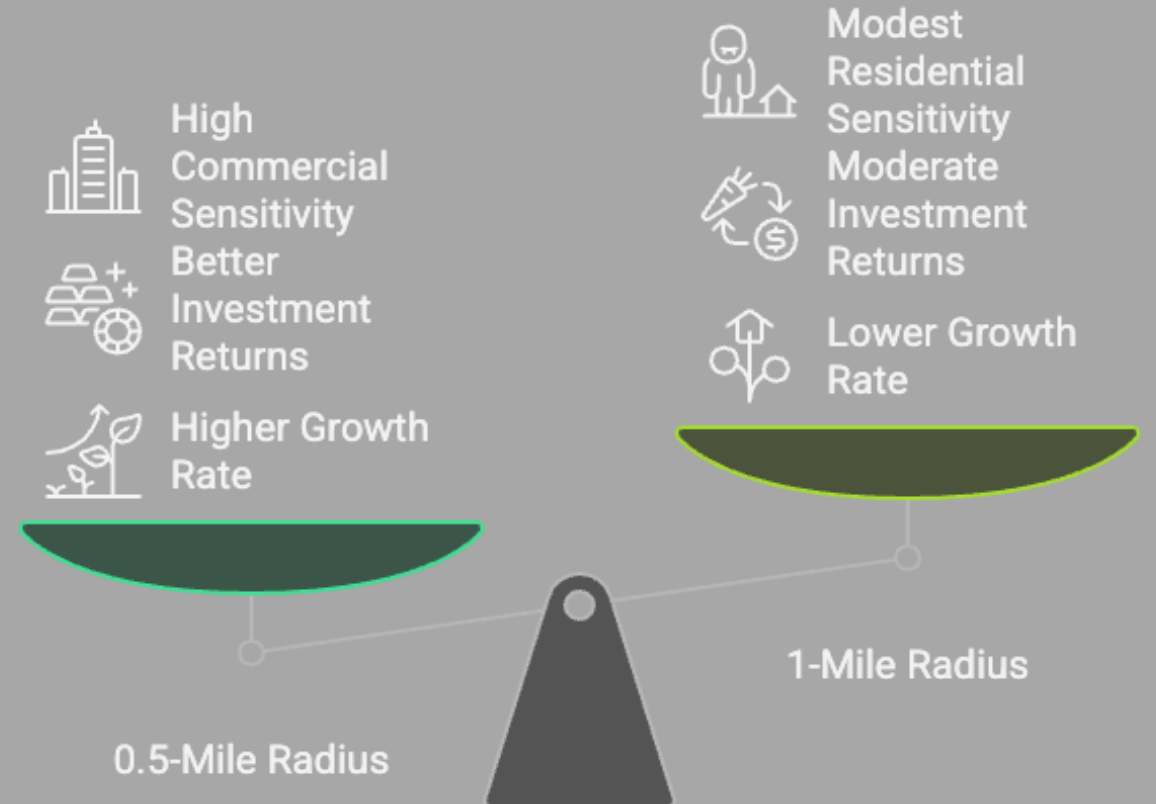
- 0.5-mile radius: Higher growth for residential properties
- Limited growth for station property unless rezoning occurs
- Growth projections: 5.5% annually (2025-2030) to 4.8% (2030-2035)
- **Key Growth Factors:** University expansion, zoning impacts, housing demand, development intensity

Comparative Analysis

0.5-Mile vs. 1-Mile Radius Properties

Growth Rate Differentials:

- 0.5-mile radius properties: 2-3x higher appreciation rates
- Most pronounced for commercial properties
- Average projected annual growth: 6.4% (2025-2030) and 5.6% (2030-2035)
- 1-mile radius: 3.9% (2025-2030) and 3.5% (2030-2035)
- Investment Returns:
- Average 10-year return (2025-2035):
 - 0.5-mile radius: 83.7%
 - 1-mile radius: 46.2%
 - Property Type Sensitivity:
- Commercial properties show highest proximity sensitivity
- Residential properties show more modest differentials



Compare property growth and returns by radius.

Comparative Analysis

Commercial vs. Residential Properties

- **Growth Rate Comparison:**
 - Commercial properties (0.5-mile): 7.1% (2025-2030) and 6.3% (2030-2035)
 - Residential properties (0.5-mile): 5.9% (2025-2030) and 5.1% (2030-2035)
 - Commercial properties (1-mile): 4.2% (2025-2030) and 3.7% (2030-2035)
 - Residential properties (1-mile): 3.6% (2025-2030) and 3.2% (2030-2035)
- **Value Components:**
 - Land value appreciation consistently stronger than improvement value
 - Commercial properties in 0.5-mile radius: Land values +103.2%, improvements +67.4%
 - Residential properties: Land values +89.7%, improvements +76.3%
- **Risk Assessment:**
 - Commercial properties: Higher volatility, greater sensitivity to economic cycles
 - Residential properties: More stable growth patterns, more predictable returns

Commercial vs. Residential Properties



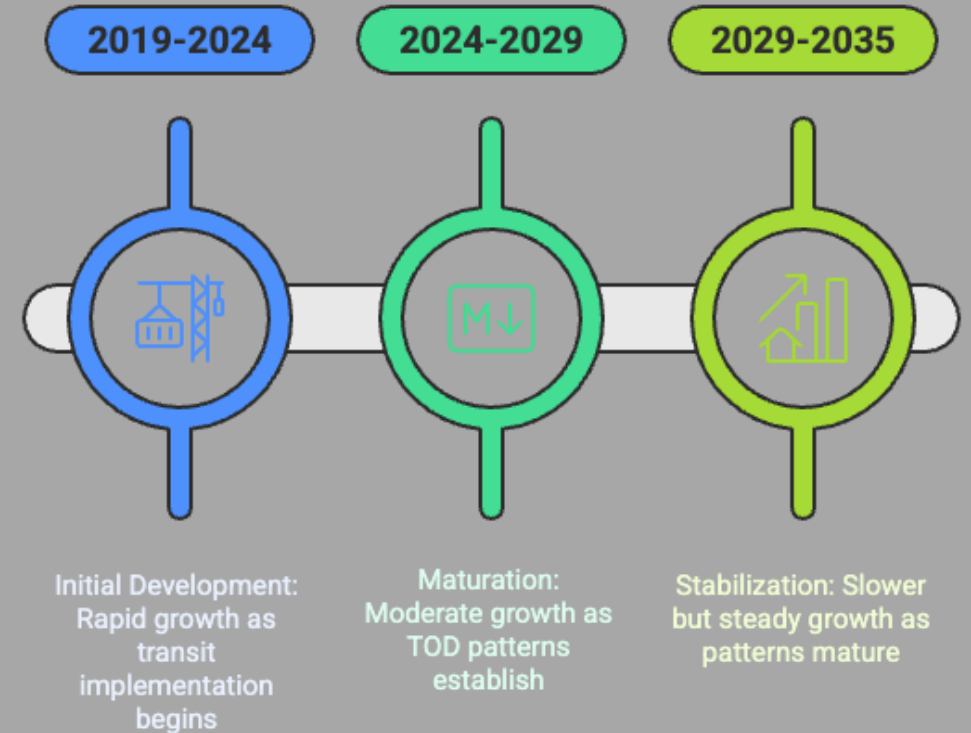
Comparative Analysis

Growth Rate Comparisons (2019-2035)

Three Distinct Periods:

- **Initial Development (2019-2024):**
 - Rapid growth as transit implementation begins
 - 0.5-mile radius: 7.1% annually
 - 1-mile radius: 2.8% annually
 - Strongest at Knoll Trail, Cypress Waters, Downtown Carrollton
- **Maturation (2024-2029):**
 - Moderate growth as TOD patterns establish
 - 0.5-mile radius: 5.7% annually
 - 1-mile radius: 3.9% annually
 - Most consistent at City Line/Bush and 12th Street
- **Stabilization (2029-2035):**
 - Slower but steady growth as patterns mature
 - 0.5-mile radius: 5.1% annually
 - 1-mile radius: 3.5% annually
 - Most stable at Addison and UT Dallas

Transit-Oriented Development Growth Timeline



Transit Development Growth Stages

Nascent Transit Areas

Early stage transit implementation

Rapid Growth

Transit implementation and high growth

Moderate Growth

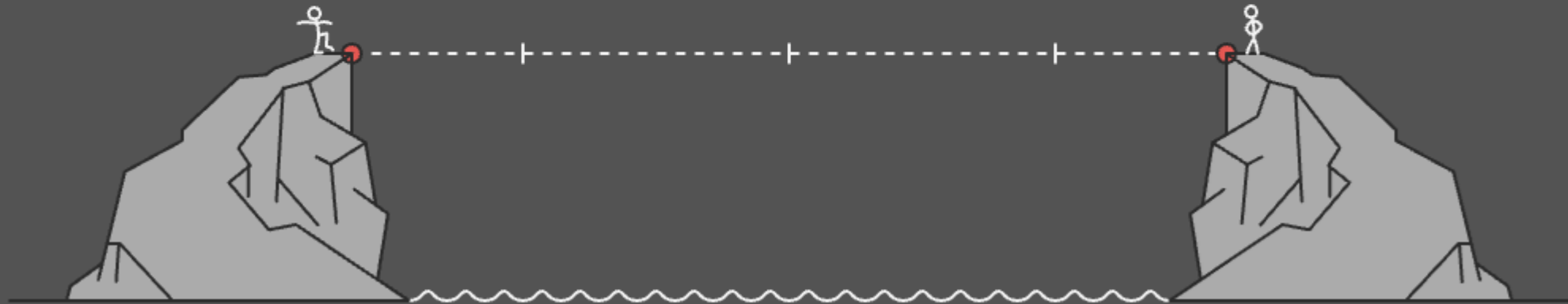
TOD patterns establish, growth moderates

Steady Growth

Patterns mature, stable growth achieved

Mature Transit Areas

Established, stable transit environment



Developed Solutions

Investment Alternatives

Alternative 1: Focus on High-Growth Stations

- Concentrates on highest projected growth stations
- Targets Downtown Carrollton and Cypress Waters
- Focuses on commercial properties with redevelopment potential
- 5-7 year investment horizon

Alternative 2: Diversified Investment Approach

- Balances investments across multiple stations and property types
- 60% allocation to 0.5-mile radius properties
- 40% to strategic 1-mile radius properties
- Balanced commercial (55%) and residential (45%) investments

Alternative 3: Value-Add Redevelopment Focus

- Targets underutilized properties with redevelopment potential
- Focus on sites suitable for transit-oriented mixed-use development
- 7-10 year investment horizon for development timelines

Investment Strategy Alternatives



High-Growth Focus

Concentrates on highest projected growth stations for commercial redevelopment.



Diversified Approach

Balances investments across stations and property types for stability.



Value-Add Redevelopment

Targets underutilized properties for transit-oriented mixed-use development.

Proposed Best Solution

Diversified Investment Approach

Strategic Allocation Framework:

Geographic Distribution:

- 25% - Downtown Carrollton (highest overall growth)
- 20% - Cypress Waters (strong consistent growth)
- 15% - Knoll Trail (strong commercial potential)
- 15% - City Line/Bush (strong mixed-use potential)
- 10% - 12th Street (stable commercial growth)
- 10% - Addison (steady long-term performance)
- 5% - UT Dallas (emerging residential potential)

Property Type Distribution:

- 55% - Commercial properties (highest overall growth)
- 30% - Residential properties (strong stable growth)
- 15% - Mixed-use properties (balanced growth)

Proposed Best Solution

Investment Strategy Details

Proximity Distribution:

- 60% - 0.5-mile radius properties (highest growth potential)
- 40% - 1-mile radius properties (value opportunities)

Investment Timing:

- 40% - Deploy in 2025-2026 (early opportunity capture)
- 40% - Deploy in 2027-2028 (mid-term opportunity capture)
- 20% - Hold for opportunistic acquisitions (flexibility reserve)

Hold Period Strategy:

- Short-term (3-5 years): Properties with immediate redevelopment potential
- Medium-term (5-7 years): Properties in high-growth locations
- Long-term (7-10+ years): Properties with stable growth characteristics

Implementation Roadmap

Phase 1: Portfolio Foundation (Months 1-6)

- Detailed site-specific due diligence
- Establish investment vehicles and capital structures
- Develop relationships with brokers and property owners
- Initial acquisitions in Downtown Carrollton and Cypress Waters

Phase 2: Portfolio Expansion (Months 7-18)

- Expand to additional station areas
- Implement value enhancement strategies
- Develop station-specific investment theses
- Establish property management infrastructure

Phase 3: Portfolio Optimization (Months 19-36)

- Reassess projections against actual performance
- Adjust allocation strategy based on performance data
- Implement targeted improvements
- Consider opportunistic dispositions

Future Work and Extensions

Data Enhancement Opportunities:

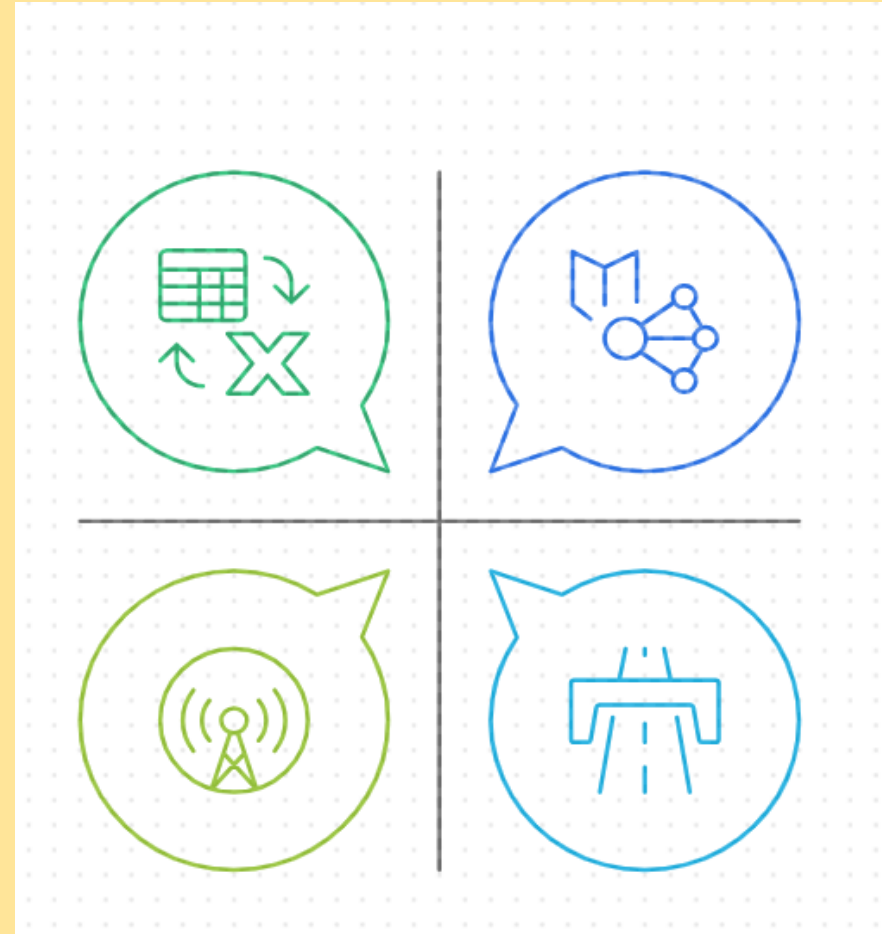
- Extended historical data incorporation
- Demographic and economic indicator integration
- Infrastructure development tracking
- Zoning and entitlement analysis

Advanced Analytics Potential:

- Machine learning applications for forecasting
- Enhanced geospatial analysis techniques
- Multi-scenario modeling
- Refined time series analysis

Extended Geographical Coverage:

- Complete Silver Line coverage (all 13 stations)
- Transit system integration analysis
- Regional and non-transit comparisons
- Corridor-level economic impact assessment



Key Findings Summary

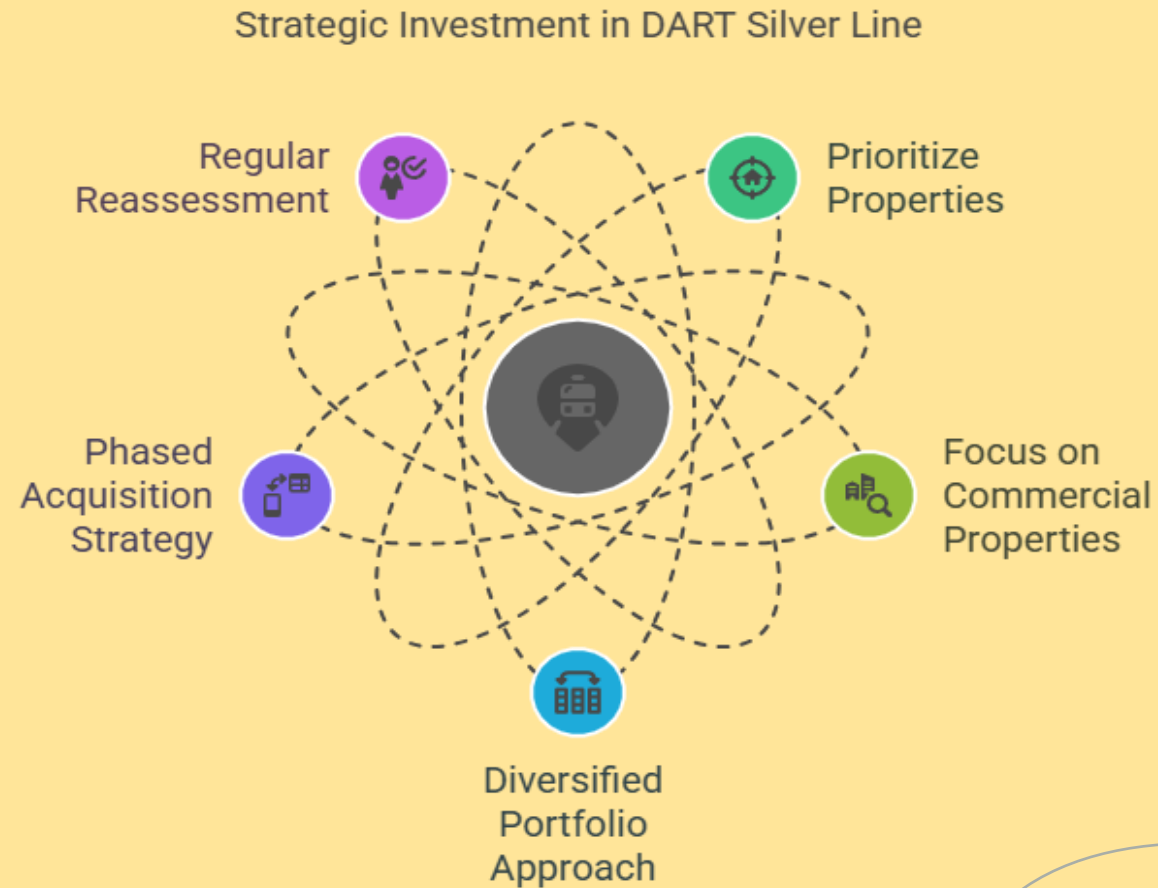
- Properties within 0.5-mile radius: 169.4% growth (2019-2035)
- Properties within 1-mile radius: 88.7% growth (2019-2035)
- Commercial properties show highest transit proximity sensitivity
- Land values appreciate more rapidly than improvement values
- Growth rates vary significantly by station location
- Different property types show varying temporal growth patterns
- Three distinct market phases identified across the decade
- Transit-oriented development driving significant premium on nearby properties

Property Growth and Market Phases (2019-2035)



Conclusion

The DART Silver Line represents a transformative infrastructure investment reshaping property values throughout the corridor.





THANK YOU