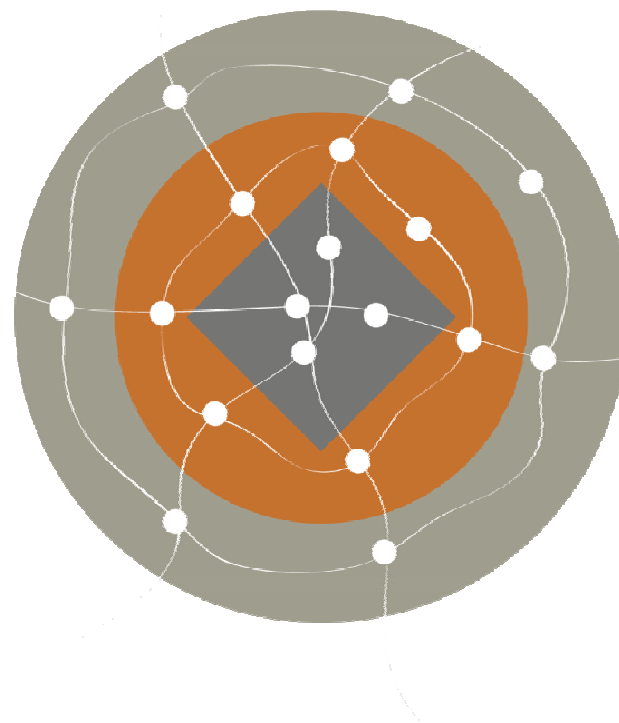


TPB Scenario Study

Draft Results



Monica Bansal

Department of Transportation Planning

Presentation to the Cooperative Forecasting and Data
Subcommittee

April 6, 2010

Why do we need an “Aspiration”?

beginnings

land use

roads and pricing

transit

results

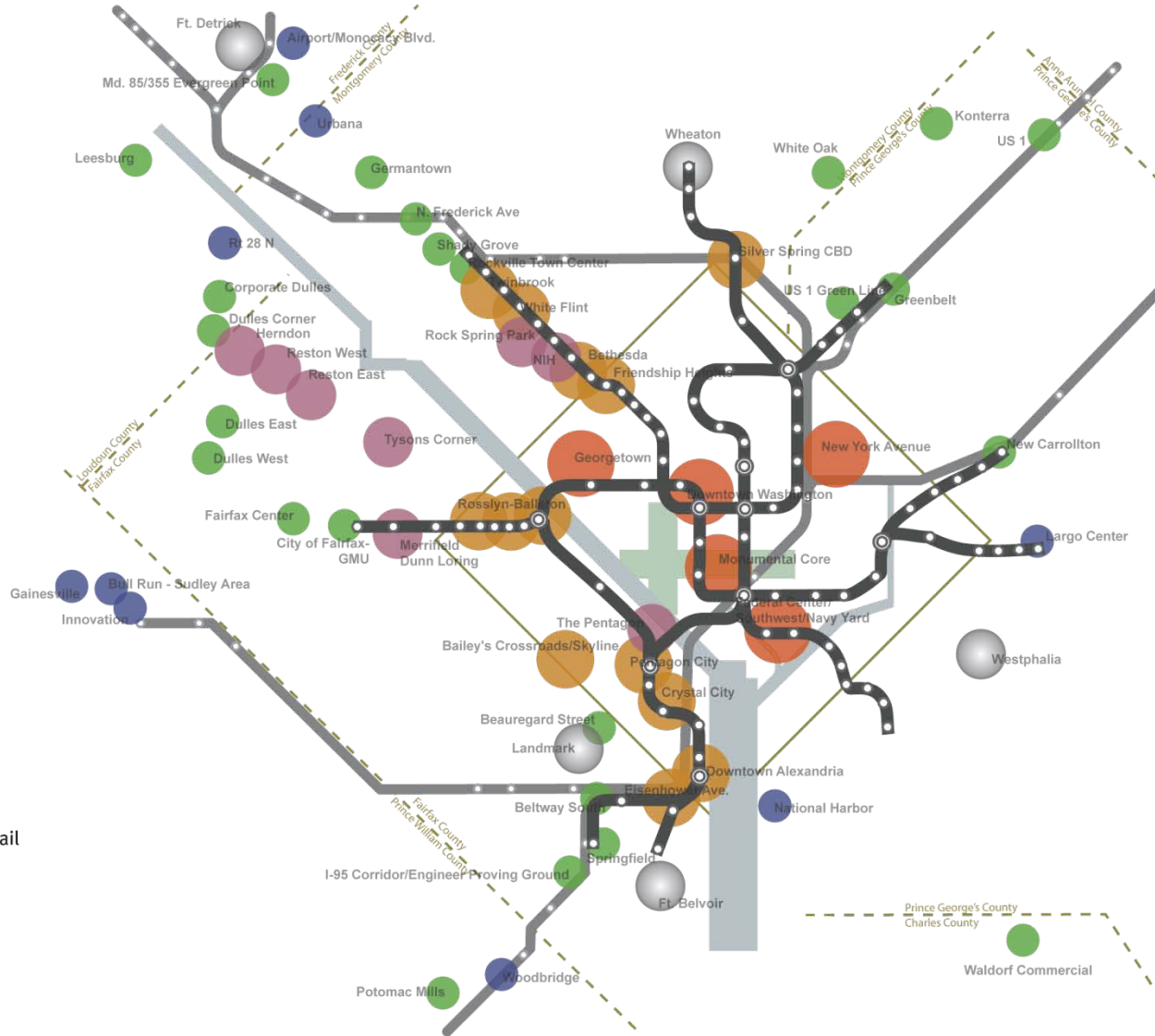
next steps



1. Activity centers still capture significant growth, but not enough (30% of 2015-2030 jobs and 24% of households)

2. Many activity centers do not have high quality transit (rail is not enough)

3. Many transit stations are still underutilized



Why Another Scenario Study?

beginnings

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roads and pricing

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results

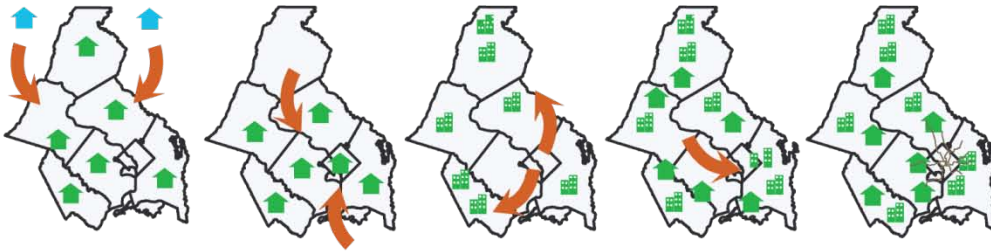
next steps



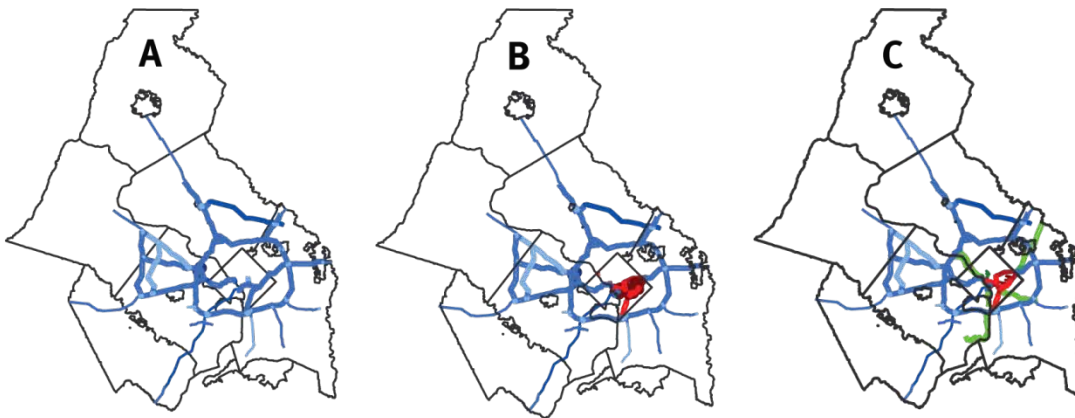
3

What Ifs

1. RMAS: Moving Jobs and Housing Closer Together



2. TPB Value Pricing Study: Pricing can provide capacity and revenue for transit



Goals

3. The TPB Vision

“Economically strong regional activity centers with a mix of jobs, housing, services, and recreation in a walkable environment”

“A web of multi-modal transportation connections which provide convenient access”

“A user-friendly, seamless system”

“Reduction of per capita VMT ”

Creating a regional land use and transportation “aspirational” vision

3 Layers to Achieving Goals

beginnings

land use

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4

1. Land Use Decisions

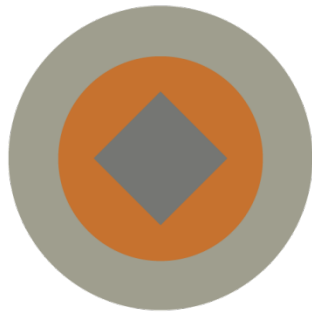
Concentrating growth in activity centers and around transit
Consistent review and refinement by planning directors

2. Pricing Options

Address congestion through pricing of new and existing lanes
Provide capacity and revenue for enhanced transit

3. Supportive Transit

Use menu of transit options from past scenarios
Connect activity centers
Review by Regional Bus Subcommittee



Layer 1

Land Use

What can we do with land use?

beginnings

land use

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Transit Supportive Density

High enough densities in activity centers to support different levels of mass transit

Walkable Density

Regional Models

Rosslyn-Ballston Corridor
Old Town Alexandria

Mixed Use

Jobs/Housing balance for the region, jurisdictions and activity centers

Move Only New Growth

Shifts from **2015-2030**

Existing Character and Planned Development

Varying land use goals

Targeted Growth Areas and Goals



beginnings

land use

roads and pricing

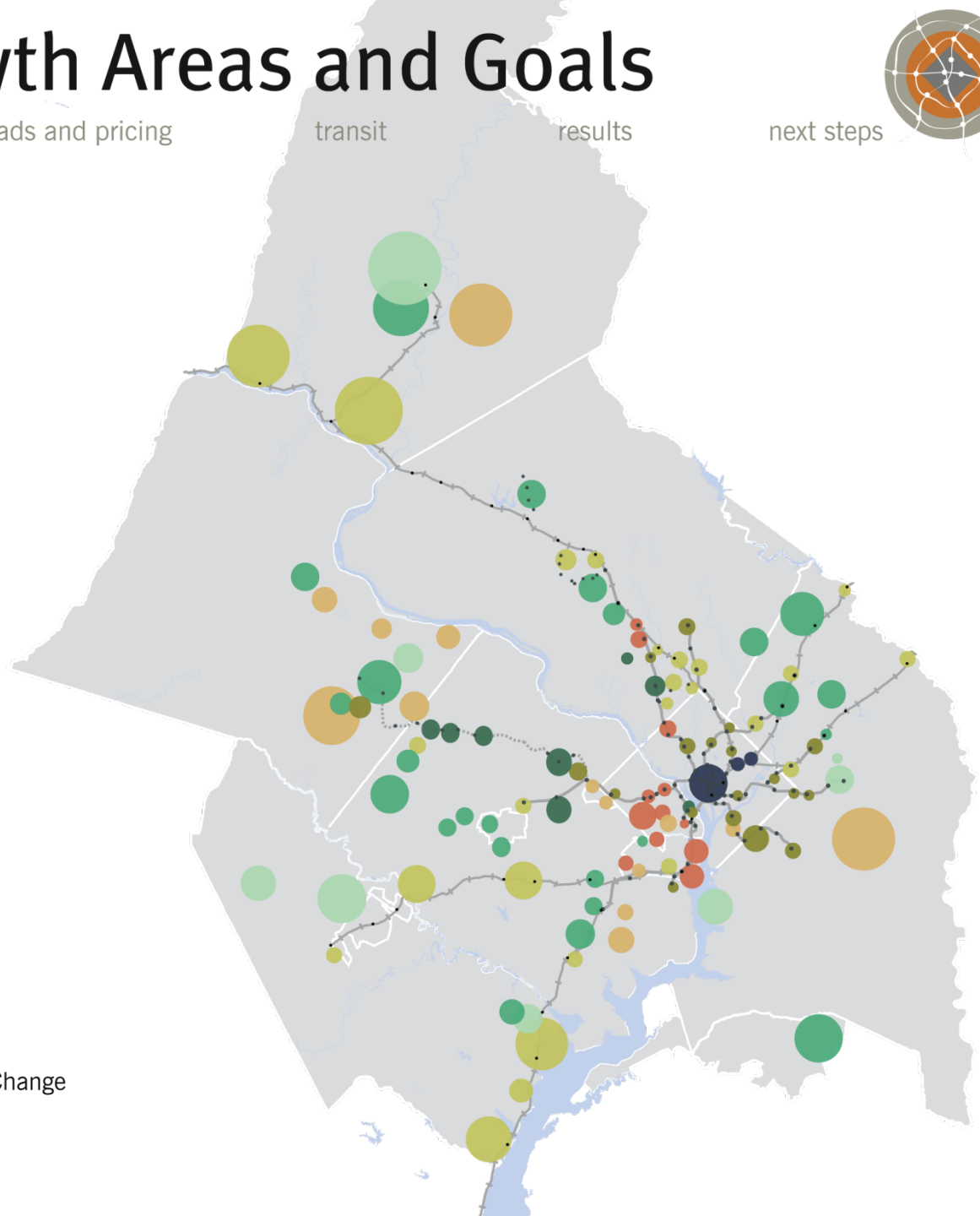
transit

results

next steps

Types of Growth Areas, Density Goals, and Jobs/Housing Balance Goals

- DC Core**
32 jobs and 20 du/acre
3 jobs/household
- Mixed Use Center**
20-32 jobs and 10-20 du/acre
2 jobs/household
- Employment Center**
14 jobs and 7 du/acre
2 jobs/household
- Suburban Employment Center**
10 jobs and 5 du/acre
2 jobs/household
- Emerging Employment Center**
5 jobs and 3 du/acre
1.6 jobs/household
- MetroRail or Transitway Station Area**
10 jobs and 5 du/acre
2 jobs/household
- Commuter Rail Station Area**
3 jobs and 2 du/acre
1.5 jobs/household
- Locally Requested Center or Area of No Change**
Goals vary according to specific local staff input.



Summary of Land Use Shifts

beginnings

land use

roads and pricing

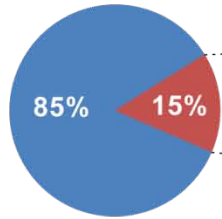
transit

results

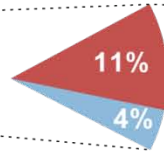
next steps



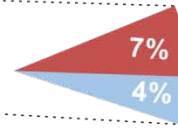
How much did we shift?



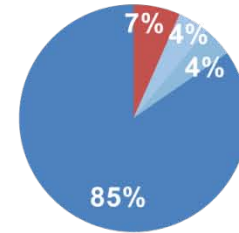
15%
of 2030 jobs &
households is
2015-2030 growth



28%
of forecast growth
in “Targeted
Growth Areas”



60%
of “movable”
growth was
shifted



7%
of the 2030 jobs
and households
was shifted

+

an additional

3.5%
increase in
households

and

1%
increase in
jobs

Summary of Land Use Shifts

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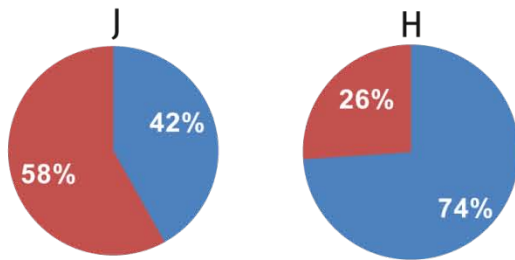
next steps



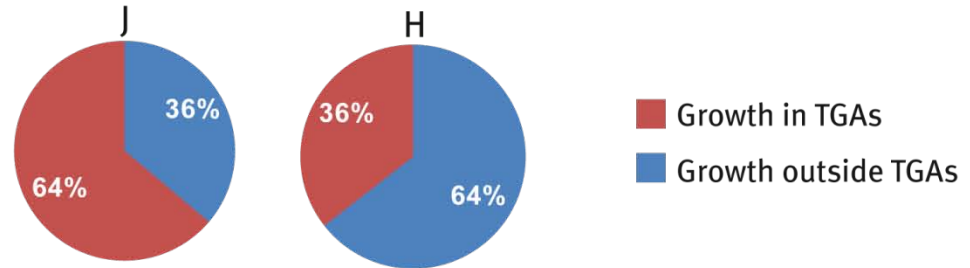
9

What did we achieve in the Targeted Growth Areas?

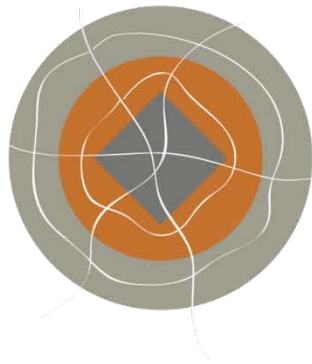
2030 Forecast



Scenario



Jobs (J) and households (H) in targeted growth areas increased by **11%** and **42%**, respectively—creating more jobs/housing balance throughout the region.



Layer 2 Pricing

Network of Variably Priced Lanes



beginnings

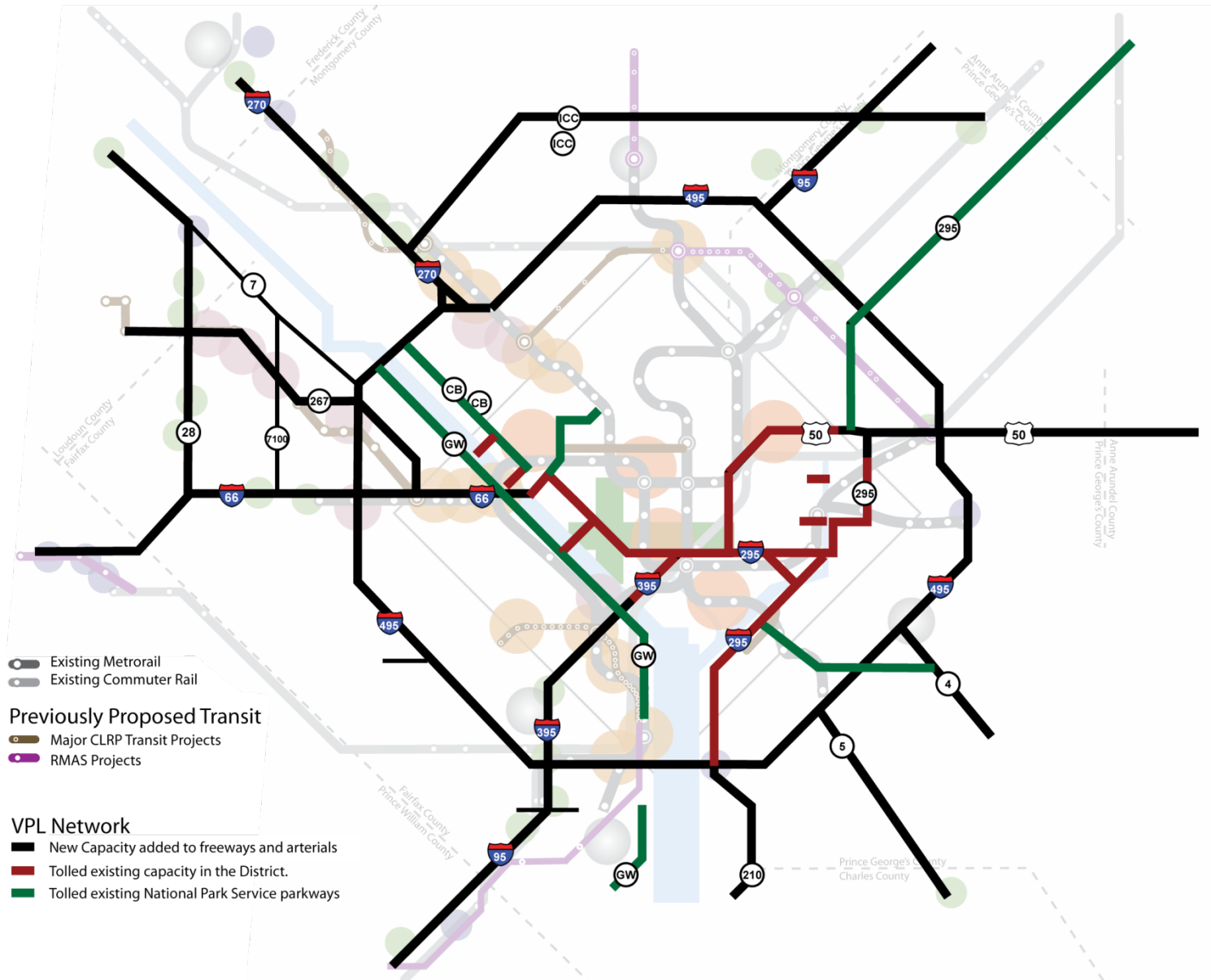
land use

roads and pricing

transit

results

next steps



Summary of Pricing

beginnings

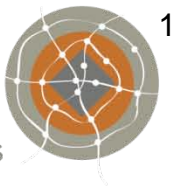
land use

roads and pricing

transit

results

next steps



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Network based on 2008 TPB Value Pricing Study

The scenario creates a **1,650**-mile regional priced lane network:

150 priced lane miles in the CLRP

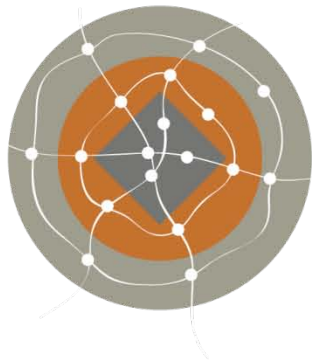
350 lane miles converted from HOV lanes

650 new lane miles

500 lane miles converted from GPLs (DC, Parkways)

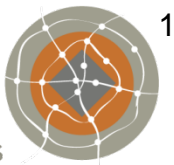
35 to 45 MPH: Priced lanes target speed

Creates relatively free-flowing right of way for bus transit



Layer 3 Transit

Bus Rapid Transit Regional Network



beginnings

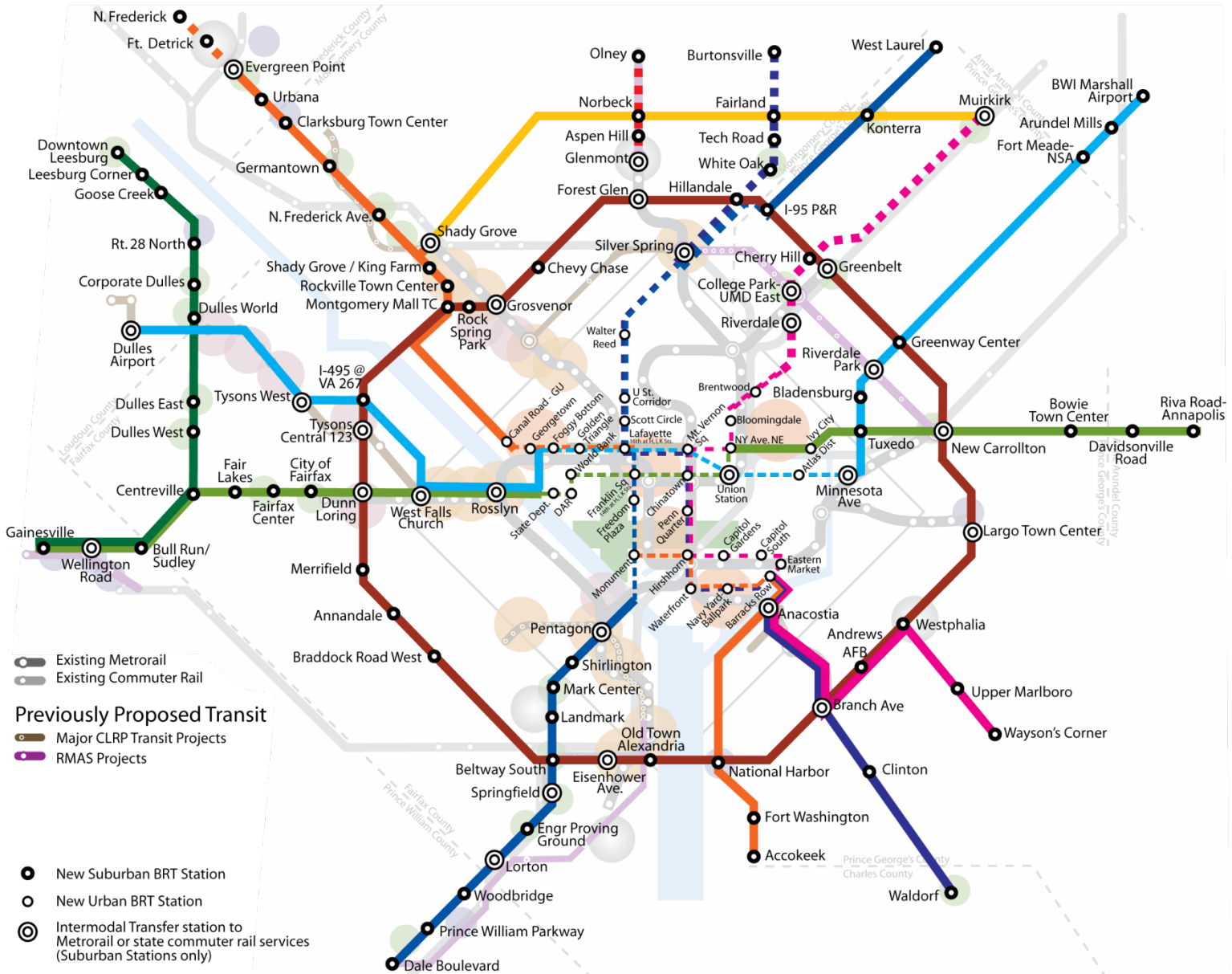
land use

roads and pricing

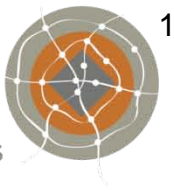
transit

results

next steps



High Quality Bus = “Rail-like” Service



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beginnings

land use

roads and pricing

transit

results

next steps

1. High Speeds

- 45 MPH on toll lanes
- 15 MPH on priority corridors

2. Frequent Service

- 10 minute peak and
- 30 minute offpeak headways

3. Convenient fare structure

Same as current services

4. Access to Current Transit

Complements existing transit with transfer opportunities

5. Extensive Reach

Complemented by 15 activity center circulator systems with 10-minute headways (added to activity centers without high quality local bus transit)



Shirlington Transit Center, Arlington, VA

Transit Summary

beginnings

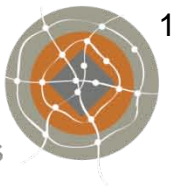
land use

roads and pricing

transit

results

next steps



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The scenario creates:

500-mile regional BRT system

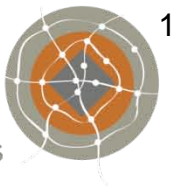
138 BRT stations located in activity centers and existing parking facilities

140 miles of circulator service

5640 new daily hours of transit service

A vast new transit service is layered on top of the priced lanes to complement existing transit services and concentrated land use

Driving Increases



beginnings

land use

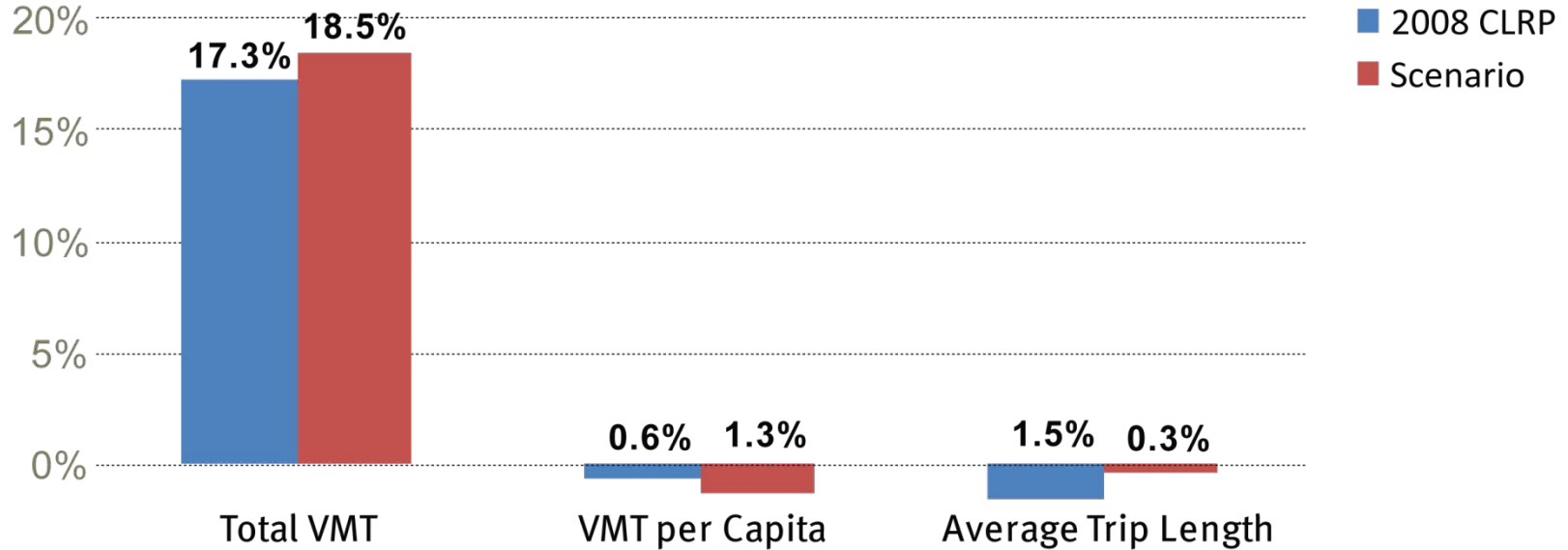
roads and pricing

transit

results

next steps

Change in Auto Use, 2010-2030



Scenario adds significant priced road capacity, increasing auto accessibility

*results as of 1/20/10

Congestion Decreases

beginnings

land use

roads and pricing

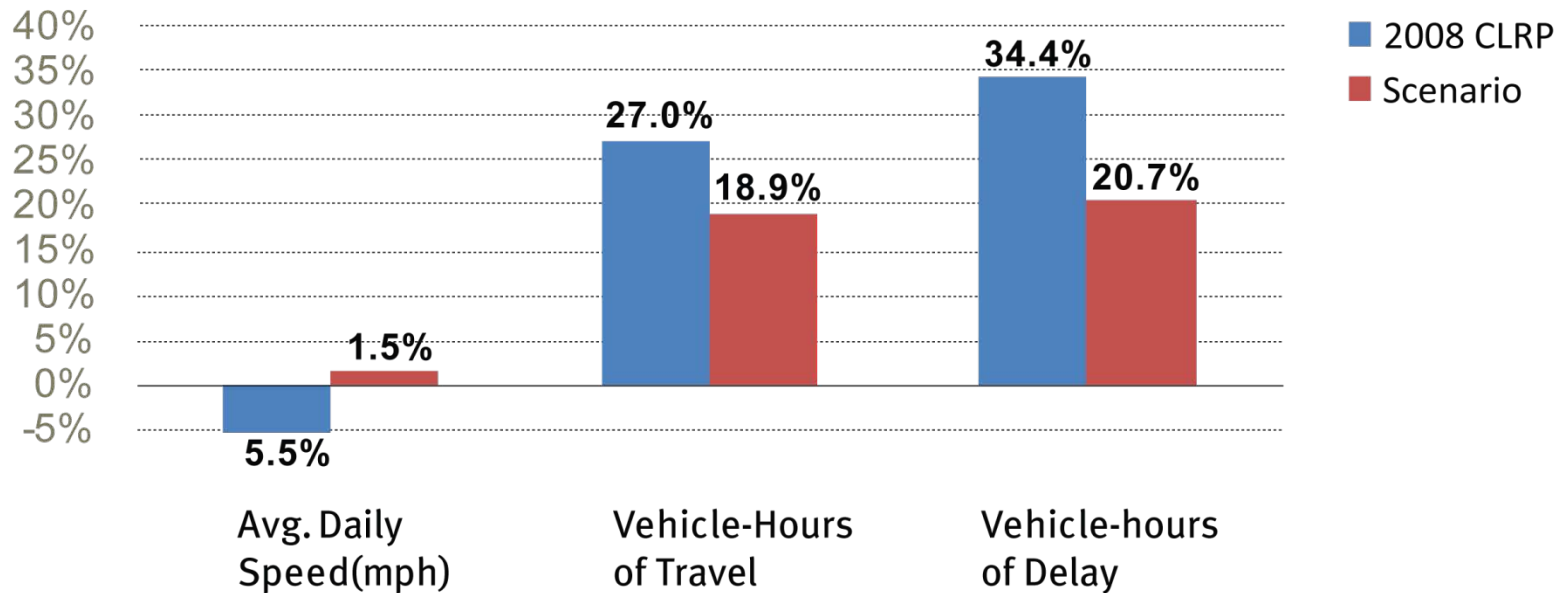
transit

results

next steps



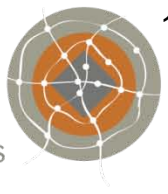
Change in Speed, Travel Time and Delay, 2010-2030



Average speeds increase, reducing total travel times and delay

*results as of 1/20/10

Transit and Bike/Walk Increases



beginnings

land use

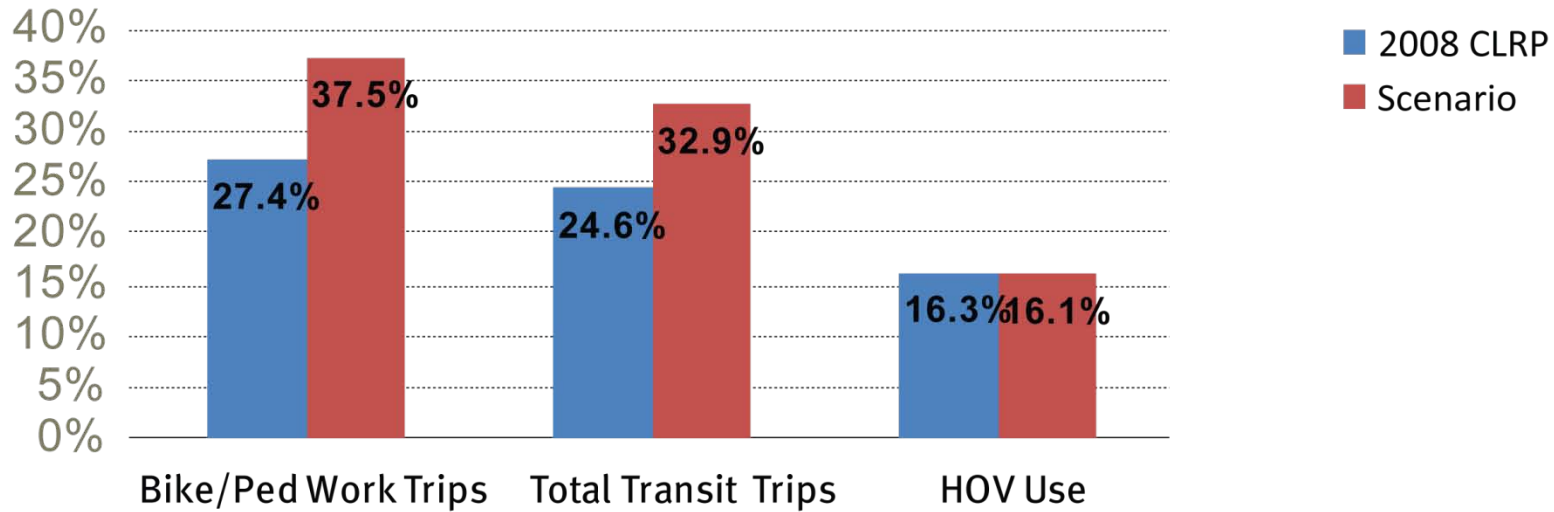
roads and pricing

transit

results

next steps

Change in Bike/Ped and Transit, 2010-2030



- 1. Moving jobs and housing closer together increases transit, bike, and walk trips**
- 2. Creating a vast transit network increases transit accessibility and attractiveness**

*results as of 1/20/10

What Next?

beginnings

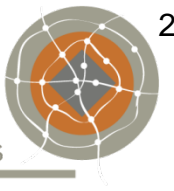
land use

roads and pricing

transit

results

next steps



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1. Further analysis and sensitivity testing

(eg: testing the land use component without the pricing and transit components)

2. Final report

Complete by June 2010