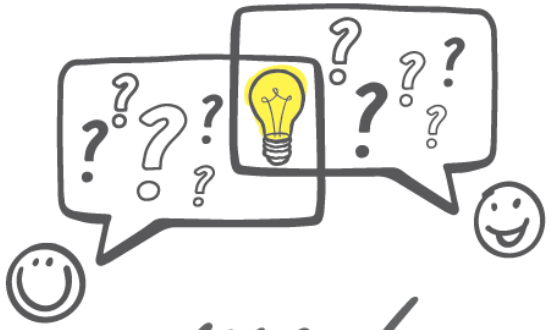

working
FUTURES GROUP
GREATER PHILADELPHIA

Dialogue. Collaboration. Knowledge-sharing.

Future Forces 2050
Working Group Meeting 4

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

Presented by:
Jackie Davis &
Brett Fusco
5/2/19

Agenda

- Recap of Meetings 1 - 3
  - Research Statement
  - Axes of Uncertainty
  - Four 2050 scenarios
- Using scenarios to stretch our thinking about the Future
- How scenarios relate to DVRPCs 2050 Long-Range Plan
- Breakout Group Discussions
- Next Steps

Future Forces 2050

- Step 1. Define Research Statement
- Step 2. Brainstorm Future Forces
- Step 3. Short Presentations on Future Forces with Highest Knowledge Gaps
- Step 4. Vote for Working List Forces Most Probable and Relevant to Research Statement
- Step 5. Vote on Impact and Uncertainty for Top 20 Voting List Forces (identified in Step 4)
- *Step 6. Use Impact-Uncertainty voting results to form axes of uncertainty.**

**DVRPC staff-led steps.*

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Future Forces 2050

- *Step 7. Use axes of uncertainty to form scenarios.**
- *Step 8. Facilitated discussion of scenario implications.*
- *Step 9. Model and develop scenario narratives. **
- Step 10. Review draft phase 1 report.
- Step 11. Facilitated discussion on scenario recommendations.
- Step 12. Publish final report and communicate key findings.

**DVRPC staff-led steps.*

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Final Research Statement

Characterize and test uncertainty from societal, technological, economic, environmental, and political trends and forces in Greater Philadelphia between the present and 2050, which may:

- *Pose new opportunities and risks;*
- *Affect predictability in regional demographics, economy, land use, infrastructure, and travel patterns; and*
- *Impact the region's ability to achieve its vision.*

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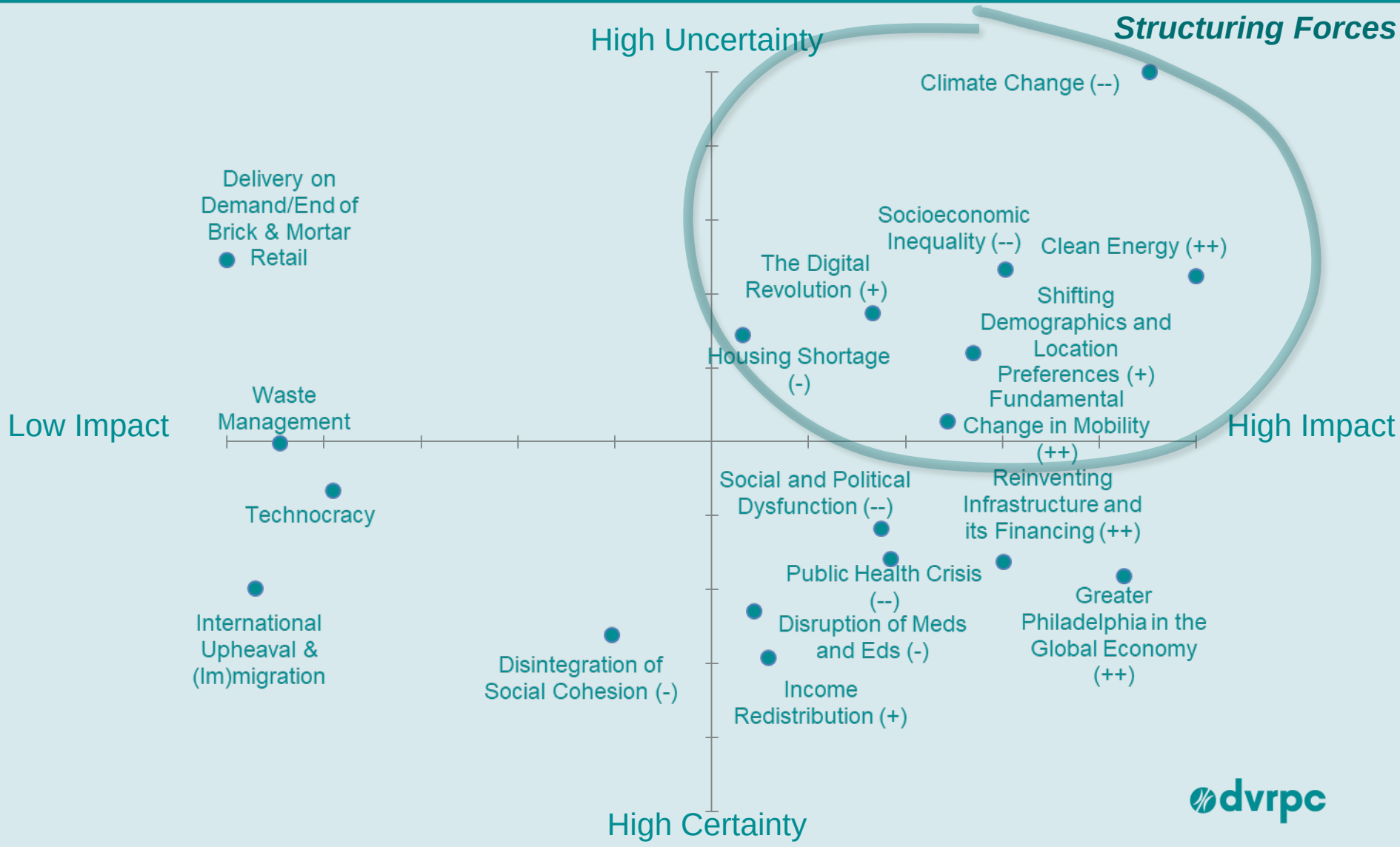
Forming Axes of Uncertainty



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Forming Axes of Uncertainty

Group 1 Digital Revolution | Fundamental Change in Mobility

Group 2 Climate Change | Clean Energy

Group 3 Socioeconomic Inequality | Housing Shortage | Shifting Demographics & Location Preferences

Q: What drives the uncertainty of these forces' potential outcomes?

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Forming Axes of Uncertainty

Digital Revolution | Fundamental Change in Mobility

Axis 1: Incremental vs. Transformative Technological Change

Climate Change | Clean Energy

Axis 2: Political Will & Collective Action vs. Continued Polarization

Socioeconomic Inequality | Housing Shortage | Shifting Demographics & Location Preferences

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Four Scenarios (Where Forces Play Out Differently)

Polarization ← Axis 2 → Political Will / Collective Action	Incremental Change ← Axis 1 → Transformative Change
	Strength in Numbers *The People*
	Technopolitical Transformation *(People & Tech) Copilots*
	Delayed Expectations *No One*
	Technology in the Driver's Seat *Big Tech*

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Future Forces Underlying Scenarios

Polarization ← Axis 2 → Political Will / Collective Action	Incremental Change ← Axis 1 → Transformative Change
	Strength in Numbers • *Digital Technologies Slow to Emerge* • *Climate Change, More Clean Energy* • *Efforts to Provide More Affordable Housing*
	Technopolitical Transformation • *Convergence of Digital Technologies* • *Fund. change in willingness to travel* • *Climate Change, More Clean Energy* • *Efforts to Provide More Affordable Housing*
	Delayed Expectations • *Digital Technologies Slow to Emerge* • *Climate Change* • *More Socioeconomic Inequality & Reliance on Market Built Housing* • *Public Health Crisis**
	Technology in the Driver's Seat • *Convergence of Digital Technologies* • *Technocracy** • *Fund. change in willingness to travel* • *Climate Change* • *More Socioeconomic Inequality & Reliance on Market Built Housing*

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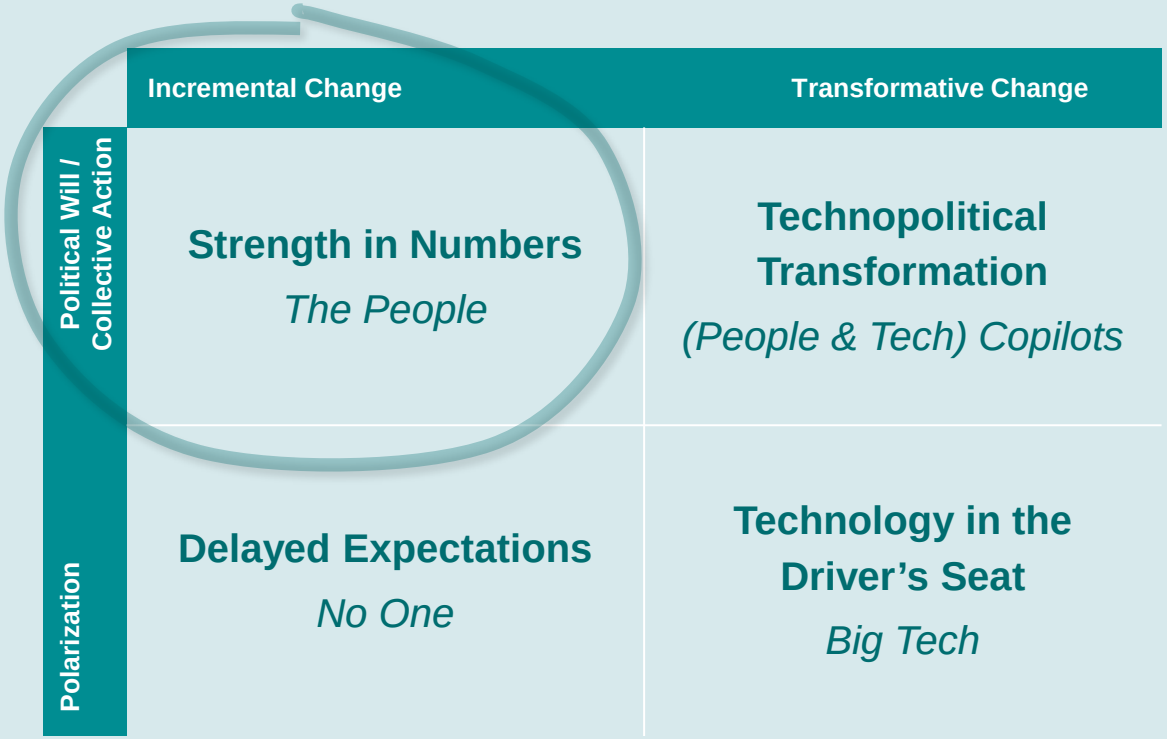
*** Wildcard / Blind Spot**

Strength in Numbers

- Technological advances have rolled out slowly, as citizens have more say in the development and regulation of technology, their communities, the economy, and privacy.

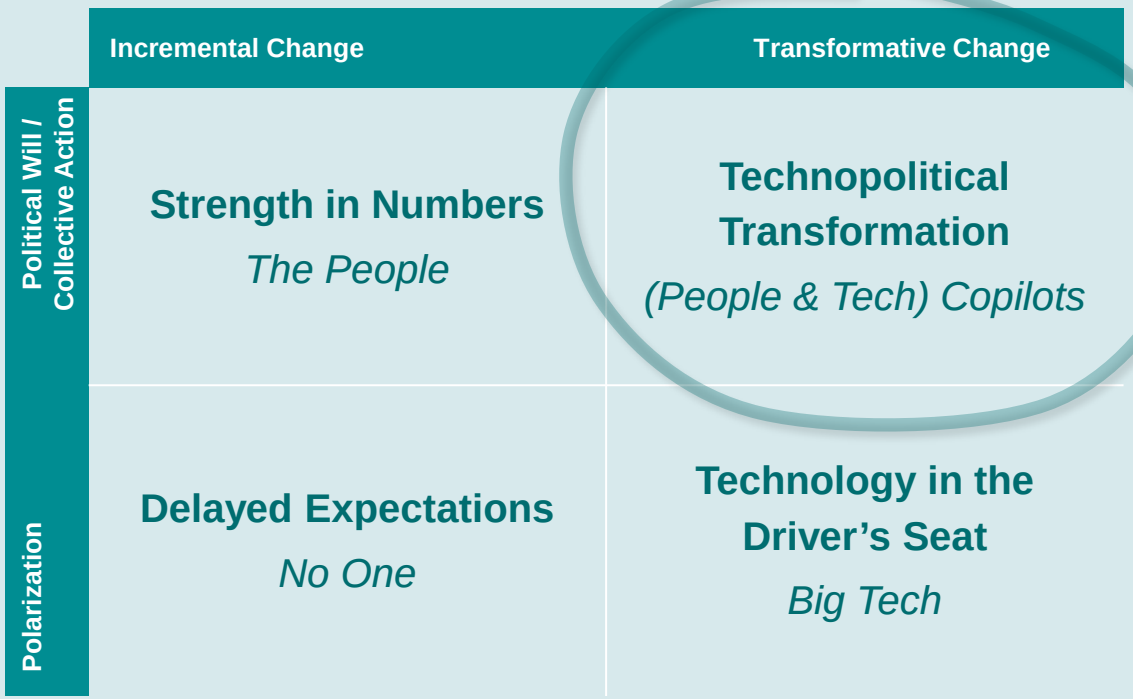
Political Will & Collective Action + Incremental Change



Technopolitical Transformation

- Citizens have more say in the development and regulation of technology, their communities, the economy, and privacy.
- Technological advances are actively directed toward achieving major societal goals.

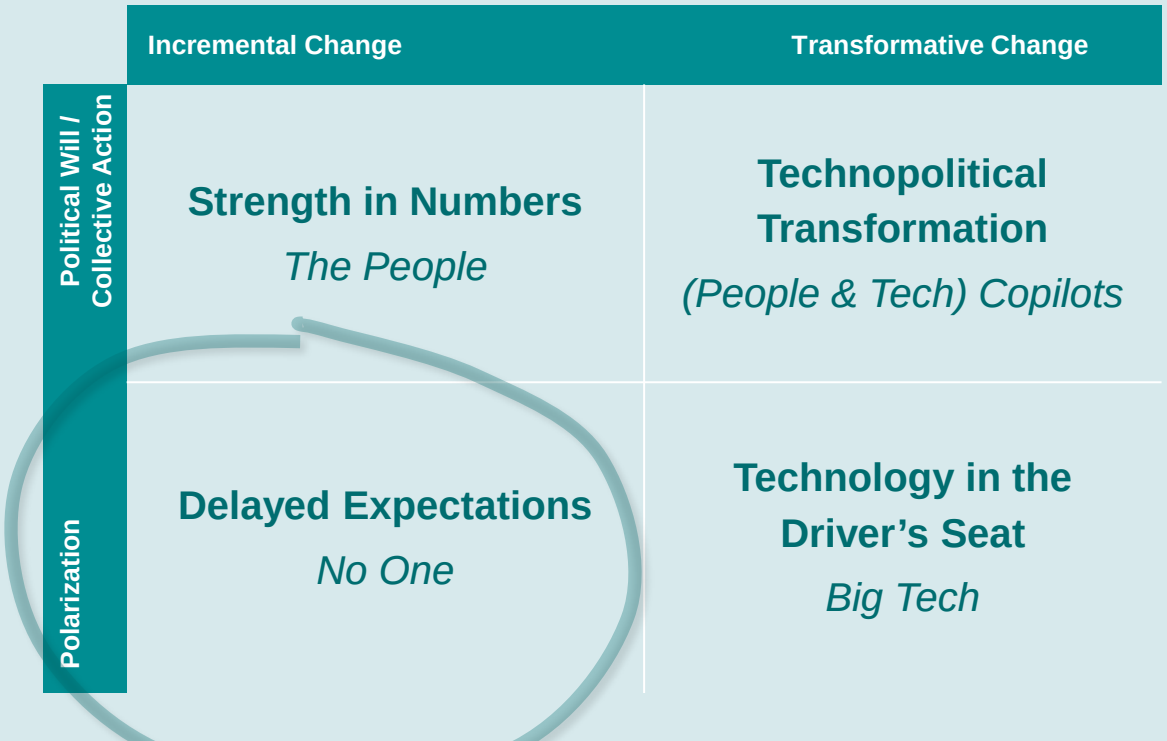
Political Will & Collective Action + Transformative Change



Delayed Expectations

- Political uncertainty, slow innovation, and lack of direction leads to economic stagnation.
- Long-anticipated technologies have been slow to roll out after hitting a few bumps in the road.

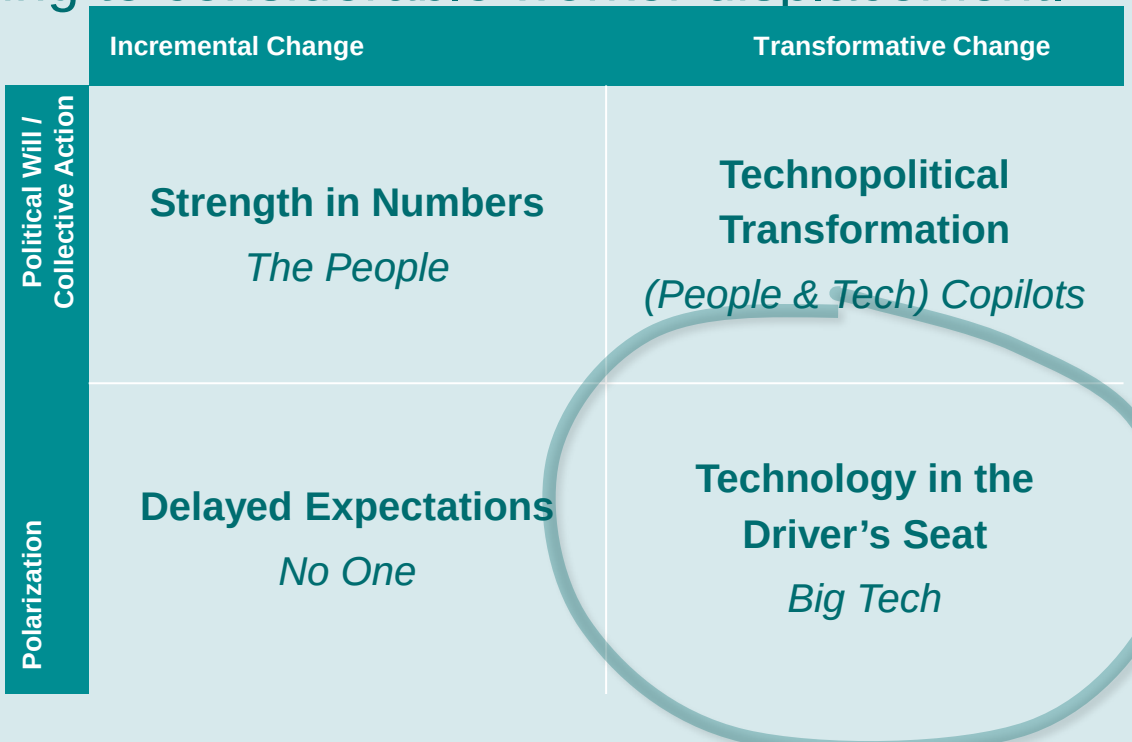
Polarization
+
Incremental Change



Technology in the Driver's Seat

- The private market has increasing control over technological development & deployment, the economy, and how communities grow and develop.
- Automation has upended work, transportation, and many other industries, leading to considerable worker displacement.

Polarization + Transformative Change



Thinking About Scenarios

- Use them as platforms, to understand how key issues could unfold differently between now and 2050
  - Inequality
  - Climate Change & Environment
  - Transportation Technology
  - Transportation Infrastructure & Financing
  - The Economy and Work
  - Development Patterns & Housing
  - Demographics & Health
- Still developing a ‘first draft’
  - Revisions to come based on your input

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Scenario Development Best Practices

- **Be plausible** – fall within the limits of what is reasonably expected to happen.
- **Structurally different** – take radically different paths in key aspects, not simply variations of a base case.
- **Logical consistency** – no internal inconsistencies that undermine credibility.
- **Have utility** – adhere to the decision focus and are useful in identifying strategic options.
- **Challenge conventional wisdom** – expand our horizons and broaden our definition of probability.

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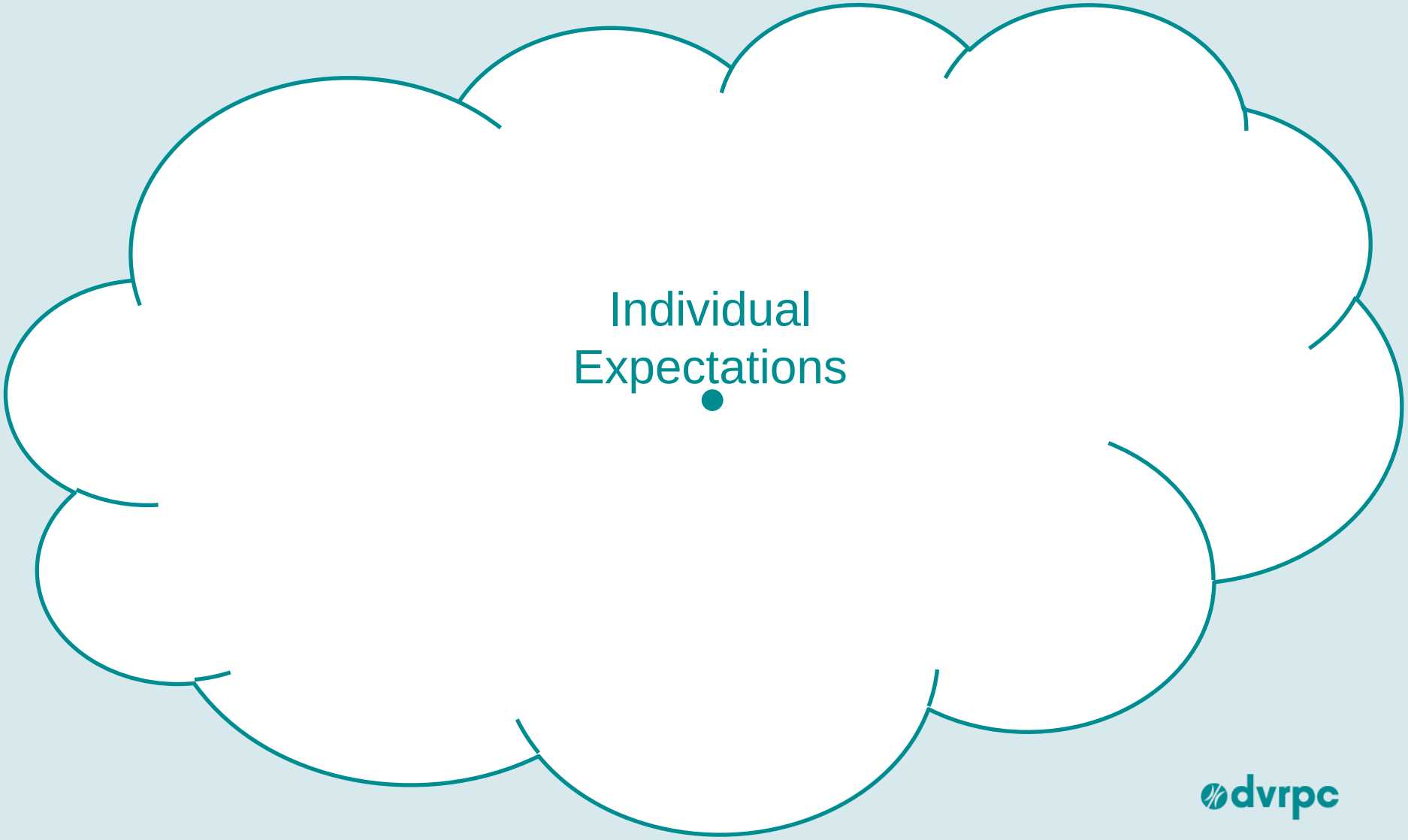
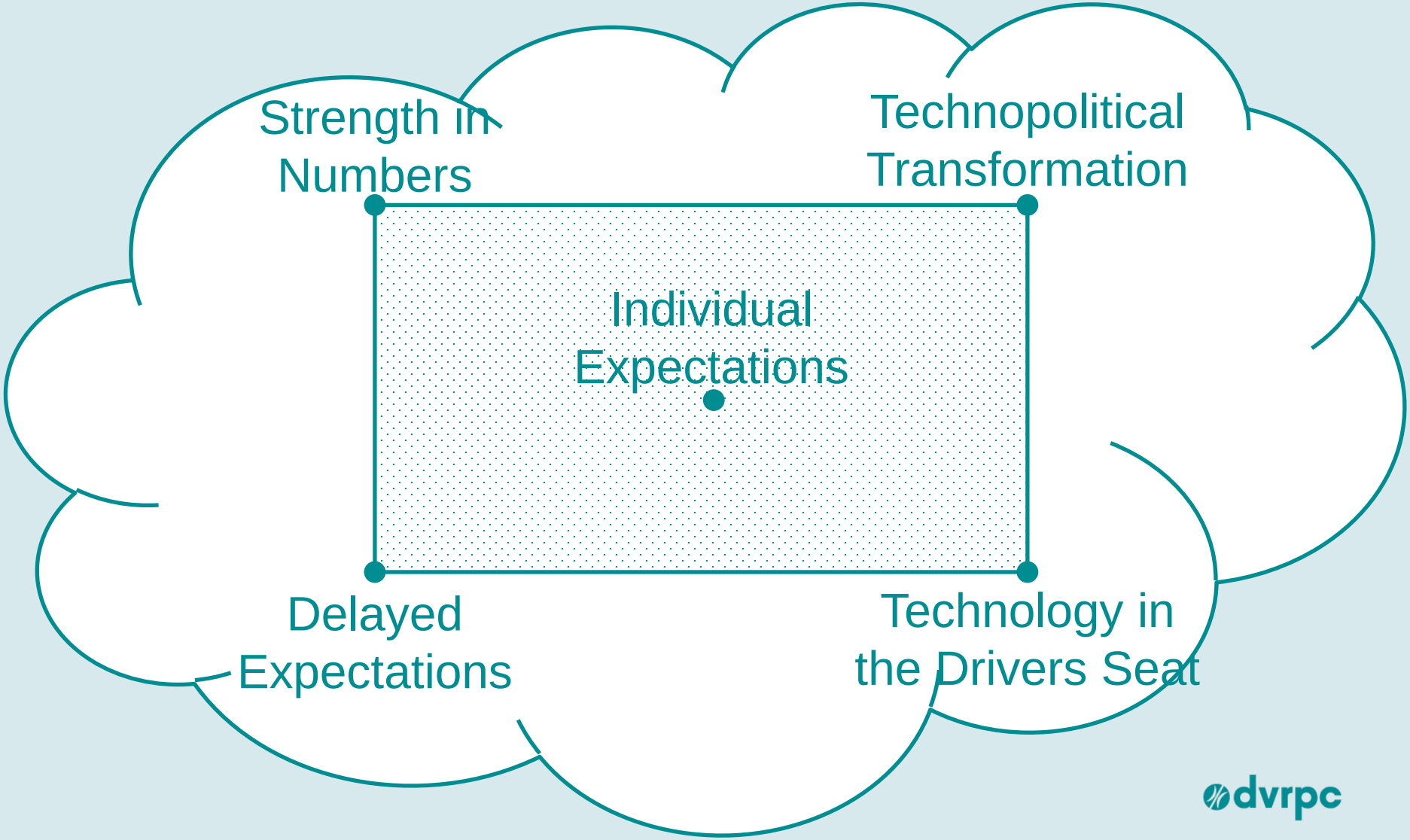
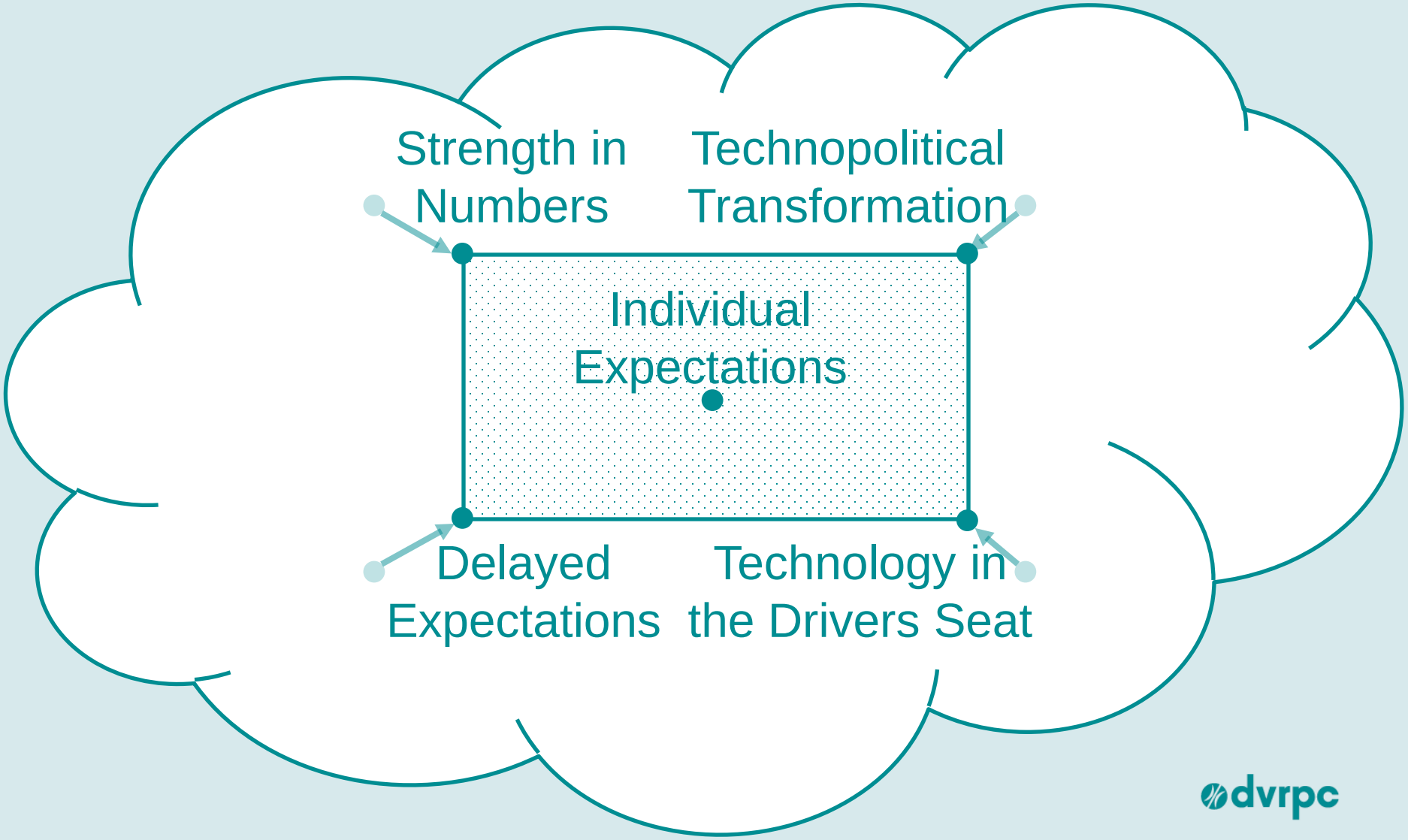
Vision for the Future



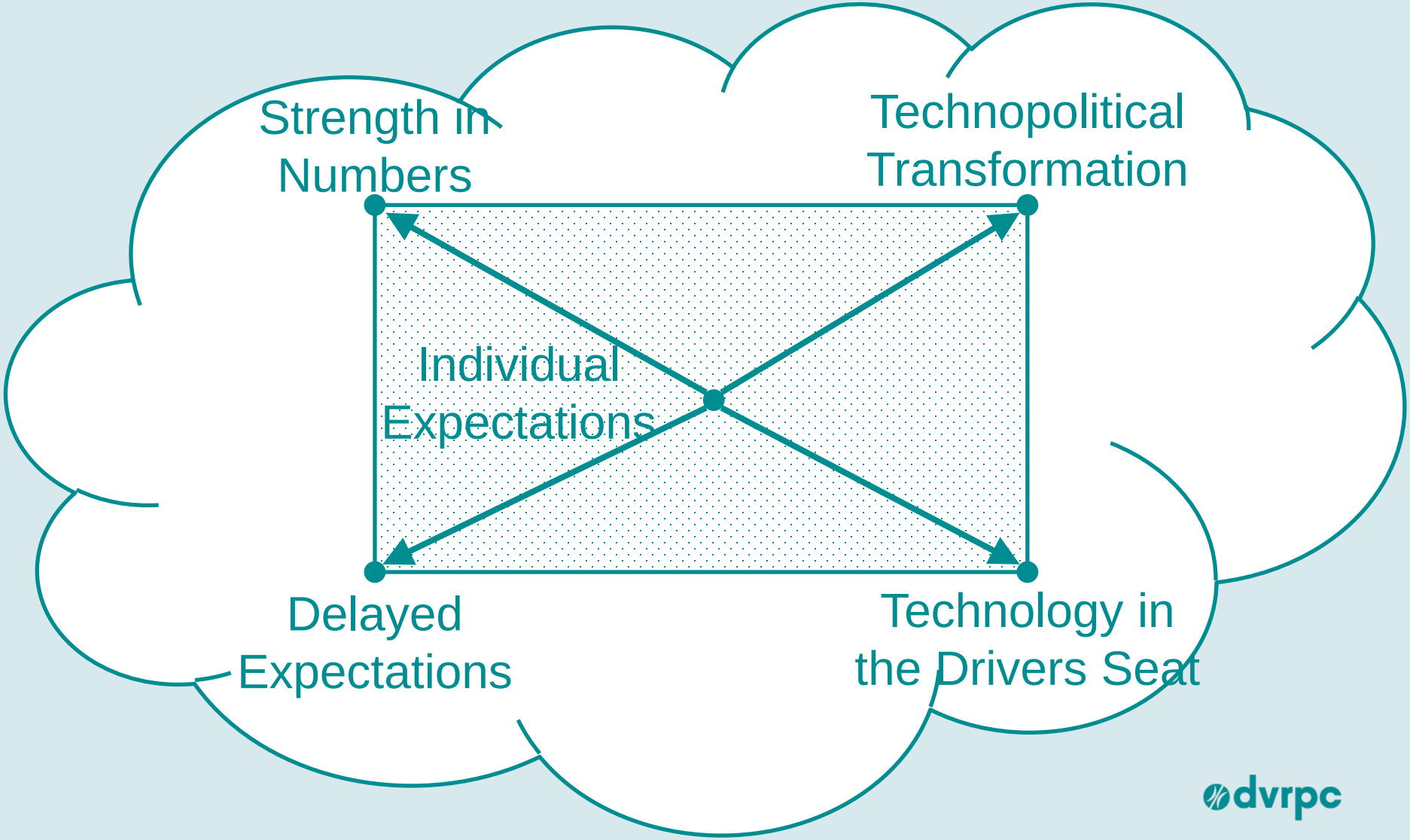
Plausible Future Scenarios



If We Pull Back Based on Our Expectations



Instead, Try to Stretch Your Understanding of the Future



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“The only relevant discussions about the future are those where we succeed in shifting the question from whether something will happen to what would we do if it happened”

Arie de Geus
Shell International Petroleum Company

Where the Scenarios fit into the LRP

- Helps to inform the Plan's:
  - Vision
  - Strategies
  - Financial Plan
- It's okay for issues and recommendations to stretch beyond DVRPC's purview.
  - See this as a regional exercise, not just a DVRPC one.

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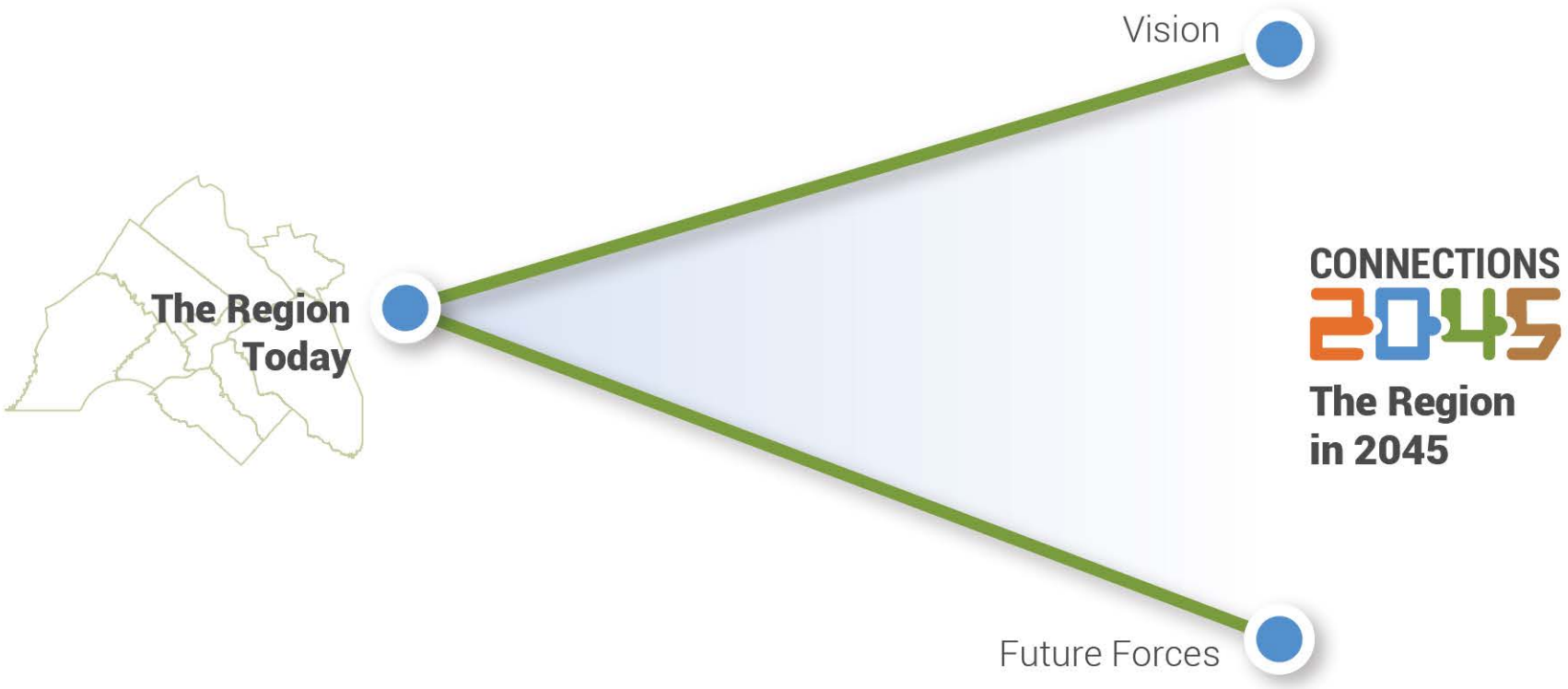
Future Forces vs. Vision



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Long-Range Plan Strategy

- Low-Regrets Actions
  - Short-term, unlikely to build in path dependence in a negative direction.
- Robust / Universal Actions
  - Work across a range of different future.
- Contingent Actions
  - An action specific one scenario, unlikely to be beneficial in others.

Ground Rules

- Everyone will have a chance to speak.
- It’s OK to disagree.
- Disagree with the idea, not the person.
- Do not interrupt each other.
- If you get stuck: park the issue so the process can keep moving.

Breakout Group Discussion

1. Review implications and news headlines from meeting 3. What additions, revisions, or deletions do you suggest?

2. How will the U.S. economy grow relative to the rest of the world? How will the region's grow relative to the U.S.?

3. How will demographics (birthrates, life spans, in- and out-migration) change in this future?

4. How will the cost of driving fare relative to today?

5. What type of development do you expect in this future and where is it located?

6. What other insights do you have for this scenario?

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Next Steps

- Meeting Summary: https://www.dvrpc.org/LongRangePlan/FuturesGroup/
- **June 19th, 9 AM – Noon: Futures Group and Regional Safety Task Force Joint Meeting**
  - A Collision of Forces: Automated Vehicles and Vision Zero.
  - Sam Schwartz, Keynote.
  - Local expert panel.
  - AV and VZ focused discussion of Scenarios
- Possible second modeling inputs survey.
- This Fall:
  - Review Phase 1: Scenarios & their Implications
  - Meeting 5: Scenario Recommendations
- Please leave your nametags in the box.

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