

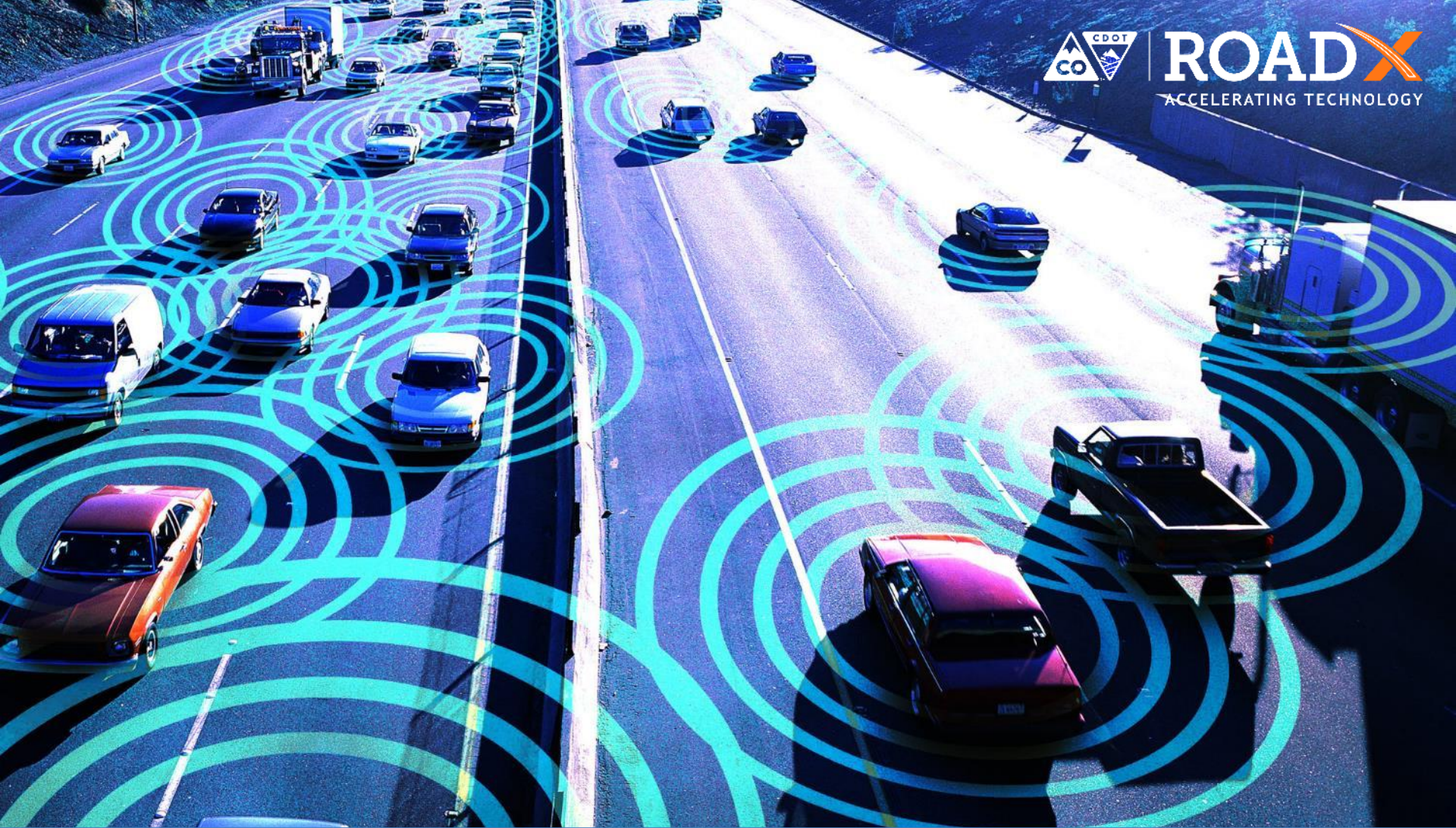


ROADX

ACCELERATING TECHNOLOGY

NCOE Peer Exchange: Technology Planning and Integration





Why Technology?

CDOT RESPONSIBILITIES



ADMINISTERS
\$208
MILLION
EACH YEAR IN FEDERAL
GRANTS

3,454

BRIDGES

CDOT
MAINTAINS & OPERATES
23,000
 **TOTAL**
LANE MILES
OF HIGHWAY



**DIVISION OF
TRANSIT
AND RAIL**

ADMINISTERS FED/STATE
GRANTS AND OPERATES
BUSTANG

6.1 MILLION
MILES
PLOWED
OF SNOW PER YEAR 

 **35** MOUNTAIN
PASSES
OPEN YEAR-ROUND

AIRPORT
PLANNING
INTERFACE WITH FAA



Source: Colorado Department of Transportation, 2014

\$1.43 BILLION BUDGET

Purpose

To save lives and make lives better by providing freedom, connection and experience through travel.



2017

Values

Safety, people, integrity, customer service, excellence and respect are at the heart of all that we do.

Summit

The best DOT in the country for all customers by focusing on our people, leading-edge technology and a healthy multi-modal system.

Peaks

Base Camps

Technology

Help Our People with Technology

Big Data

Improve Travel Experience with Technology

People

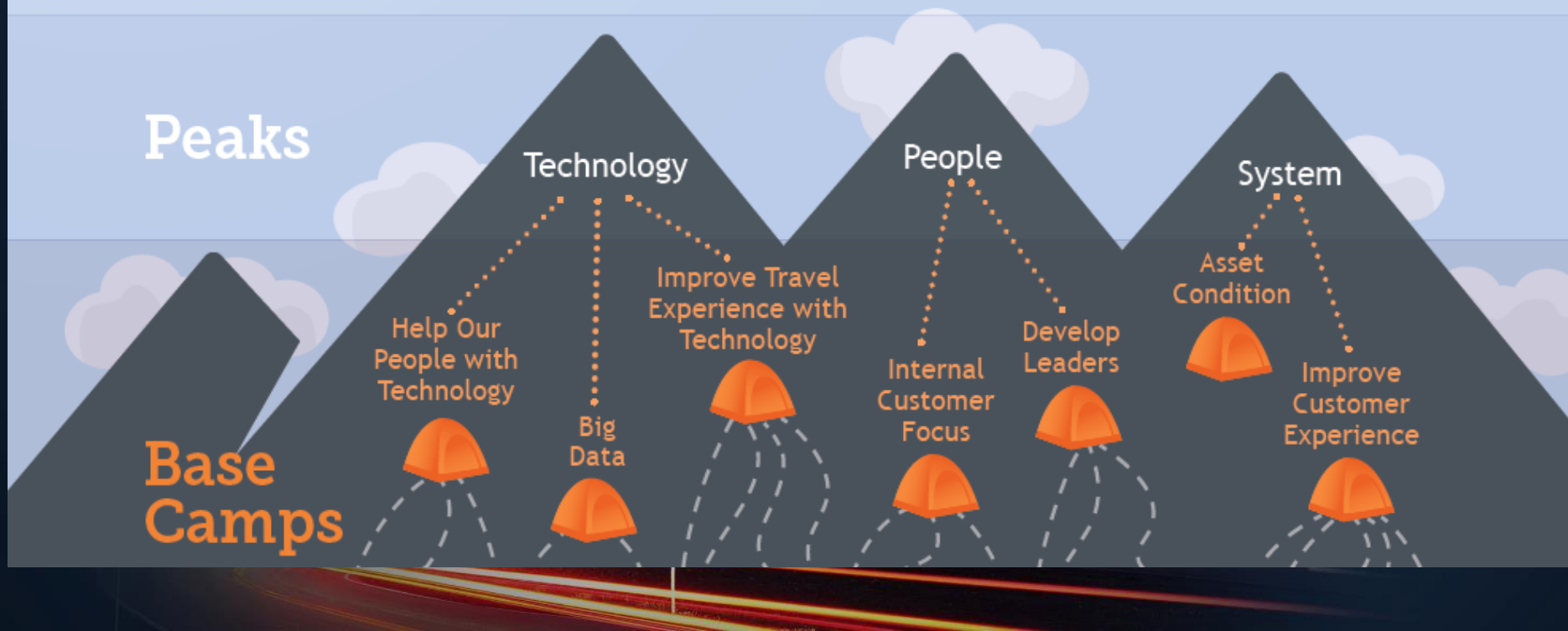
Internal Customer Focus

Develop Leaders

System

Asset Condition

Improve Customer Experience



1991



3.3 million



**27.7 billion
vehicles miles traveled**

\$
 \$
 \$
 \$\$\$

2015



5.4 million



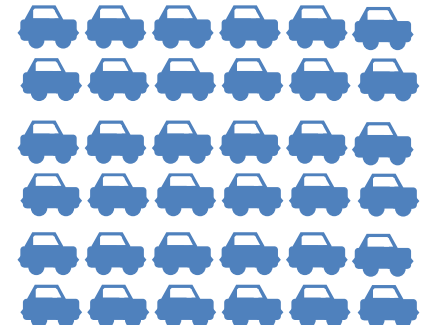
**50.5 billion
vehicle miles traveled**

\$
 \$

2040



7.8 million



**72.3 billion
vehicle miles traveled**

\$

*All dollar
figures
adjusted for
inflation*

Transportation Impacts Us All



Vision
for the
Future



Safety &
Reliability



Economic
Vitality



Rapid
Technological
Advancement



Funding

WHY ACCELERATE TECHNOLOGY?



Safety

80% of accidents could be reduced or eliminated



Innovative Road Solutions

Could nearly quadruple highway capacity



Saved Time

Could save about 50 minutes per day



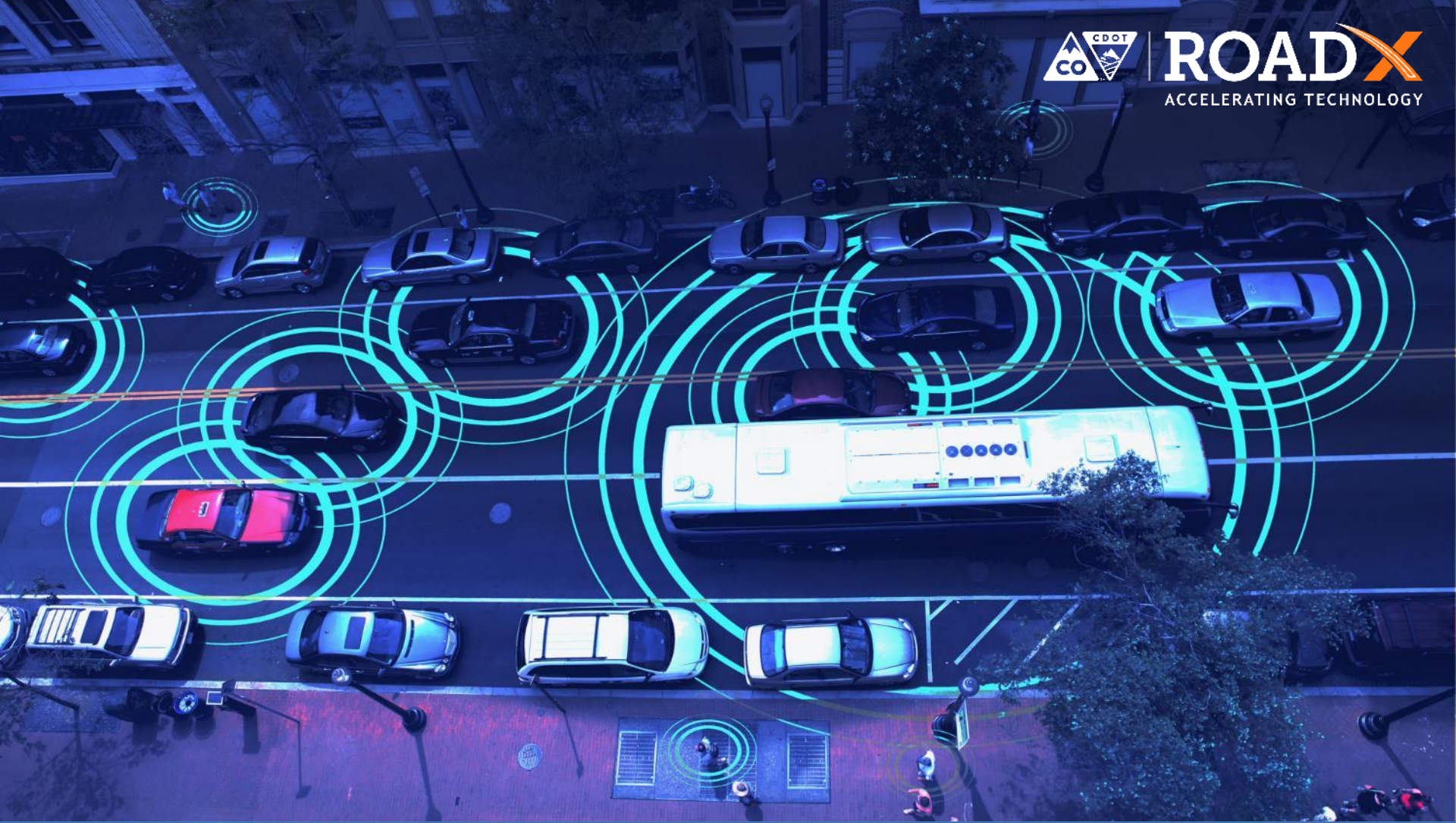
Expanded Mobility

Mobilizes elderly and handicapped populations



Environmental Benefits

Reduces congestion and vehicle emissions



What's happening in
transportation technology?

Disruptive Technology - displaces an established technology and shakes up the industry or a ground-breaking product that creates a completely new industry.

Is a Modern Vehicle a Disruptive Technology?



TRENDS



ELECTRIFICATION



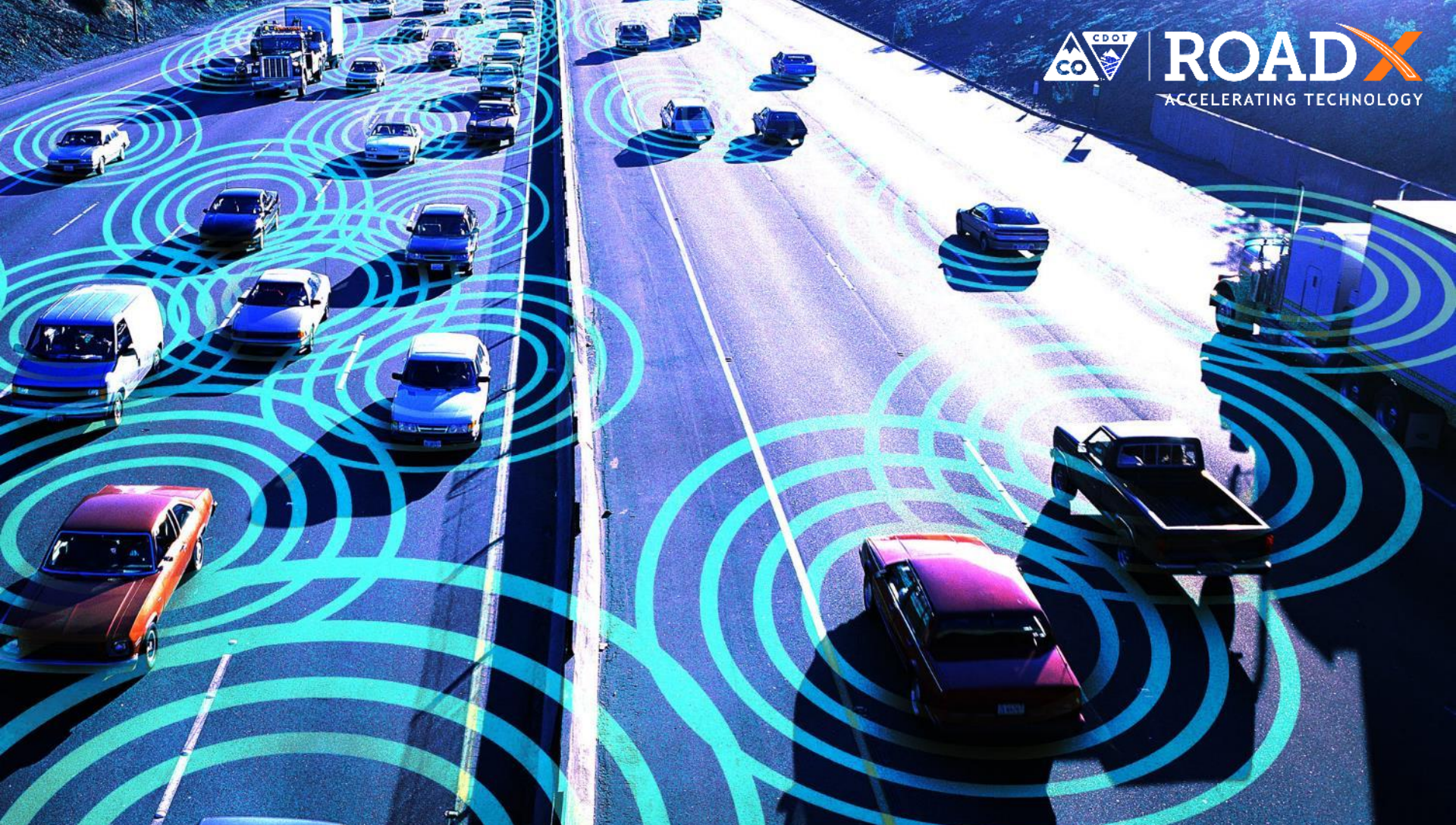
**DIVERSE
MOBILITY**



CONNECTIVITY



SELF-DRIVING



Moving Forward

ROADX

RoadX **VISION:** Technologically transformed travel across Colorado – free of crashes, injuries and delays.

RoadX **MISSION:** Team with public and industry partners to make Colorado one of the most technologically advanced transportation systems in the nation, and a leader in safety and reliability.

Colorado Is Open For Business: Colorado invites partners to join us in accelerating the adoption and deployment of technological solutions.



SUPPORTING ROADX



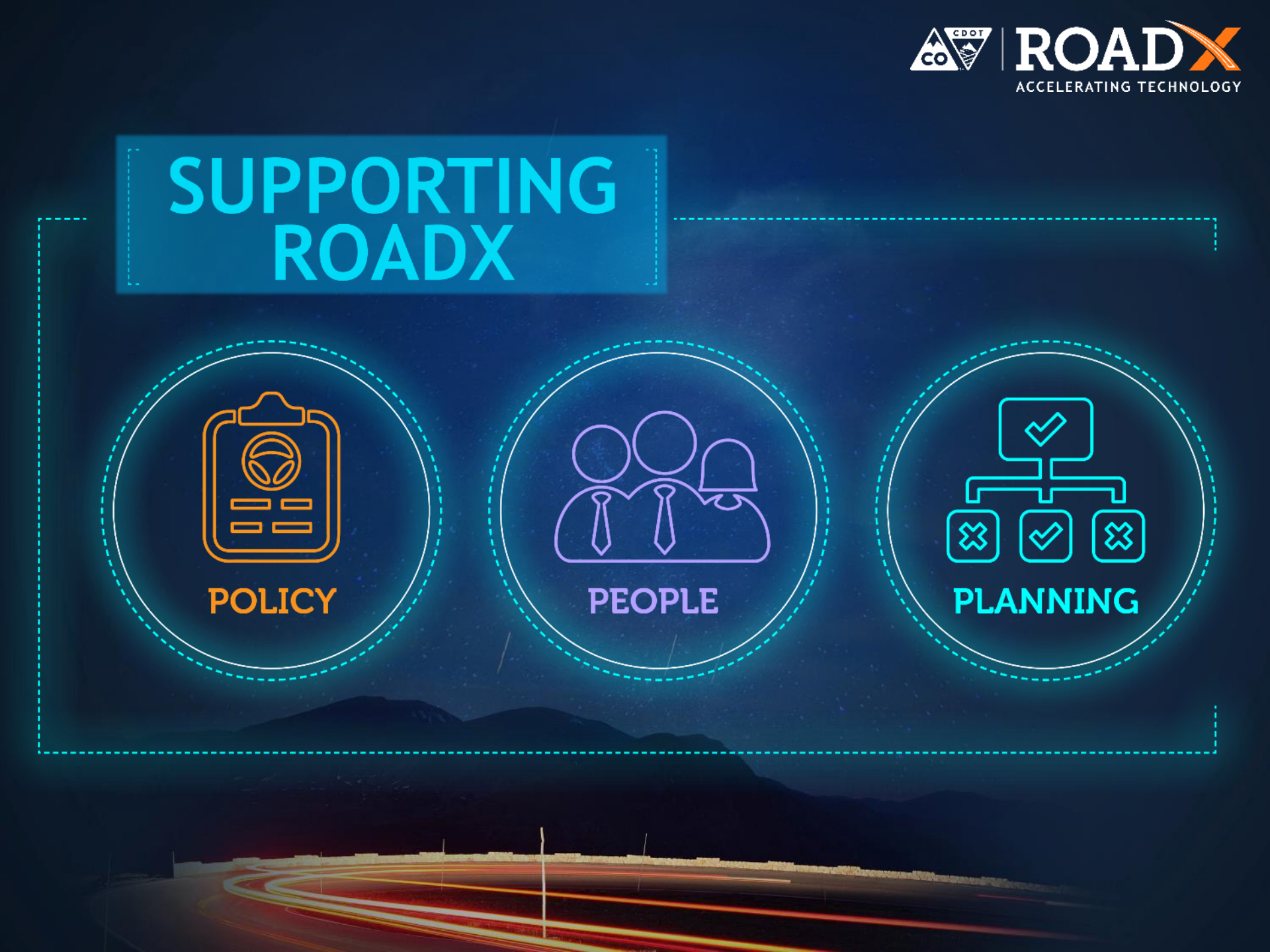
POLICY



PEOPLE



PLANNING



POLICY

- Decision to make a significant program (not just a project)
- Includes multiple divisions
 - TSM&O
 - Engineering
 - Planning
 - Communications
- \$20 m+ for first two years with dedicated funding to communications



PEOPLE

- Multiple stakeholders and partners
 - Private sector/technologists
 - RoadX Champions (consultant/regions)
 - Other state agencies (Colorado State Patrol, DMV, Energy, Economic Development)
 - Elected officials
 - Innovisers Council
 - Local jurisdictions (Denver, Centennial)
 - Research partners (NREL, Universities)
 - Other states
- Public!!!



WHAT COLORADANS THINK

Drivers are not yet comfortable with self-driving cars (cost and potential for equipment failure).

Acceptance increases with familiarity.

Road and traffic communication technologies are less familiar than car features, but easier to accept.

Privacy is significant concern, but most trust CDOT to manage their data.

Coloradans can visualize benefits of the new technologies.

Support for CDOT taking the lead in education and testing.

National Research Center, 841 respondents, May 2016

PLANNING

- Communication part of strategic planning from beginning
- Used all consultants to support (two comms firms, research, media buying)
- Developed robust strategic communications plan



PROGRAM

COMMUTING SUSTAINABILITY TRANSPORT



SAFETY

CONNECTION



PURSUIT



PROJECTS

Safety

Harnessing technology to
protect our most vulnerable

BICYCLE & PEDESTRIAN CHALLENGE



galvanize Workforce

Future of new skills and
training



NEXT STEPS



People

Educate public
Workforce of the Future



ROI

Invest now in
technology platforms



Privacy

Address security
issues



Technology & Planning

Plan and model
for rapid change



Regulation

Establish consistent policy
direction that supports
autonomous future



Questions?