

# **NCHRP 20-68D “US Domestic Scan Program”**

## **Domestic Scan 19-02**

### **“Leading Practices in Strategic Workforce Management by Transportation Agencies”**

### **Findings, Conclusions and Recommendations**

# NCHRP Panel's General Guidance to the Scan Team

*“This scan will examine innovative strategic workforce management strategies DOTs are implementing, particularly those activities that can be quickly adopted and implemented to recruit, develop, and retain the workforce they need today and for the future...”*

*...The scan team will consider common elements of strategic workforce management, such as skills metrics and forecasting, succession planning, employee development, employee wellness and engagement, employee recognition, recruitment, retention, diversity and inclusion, and change management. Outsourcing of functions historically performed within an agency may also be considered. The team must consider agency cultural differences and the context in which the strategic workforce management is applied.”*

# NCHRP Panel's General Guidance to the Scan Team (Cont.)

*“ This scan ... is likely to be integrated with other NCHRP activities related to workforce development and knowledge management. The scan results are likely to be of interest to all of AASHTO committees but particularly to the AASHTO Committees on Agency Administration, Human Resources, Civil Rights, and Knowledge Management, as well as FHWA's Center for Transportation Workforce Development. ”*

# Scan Team

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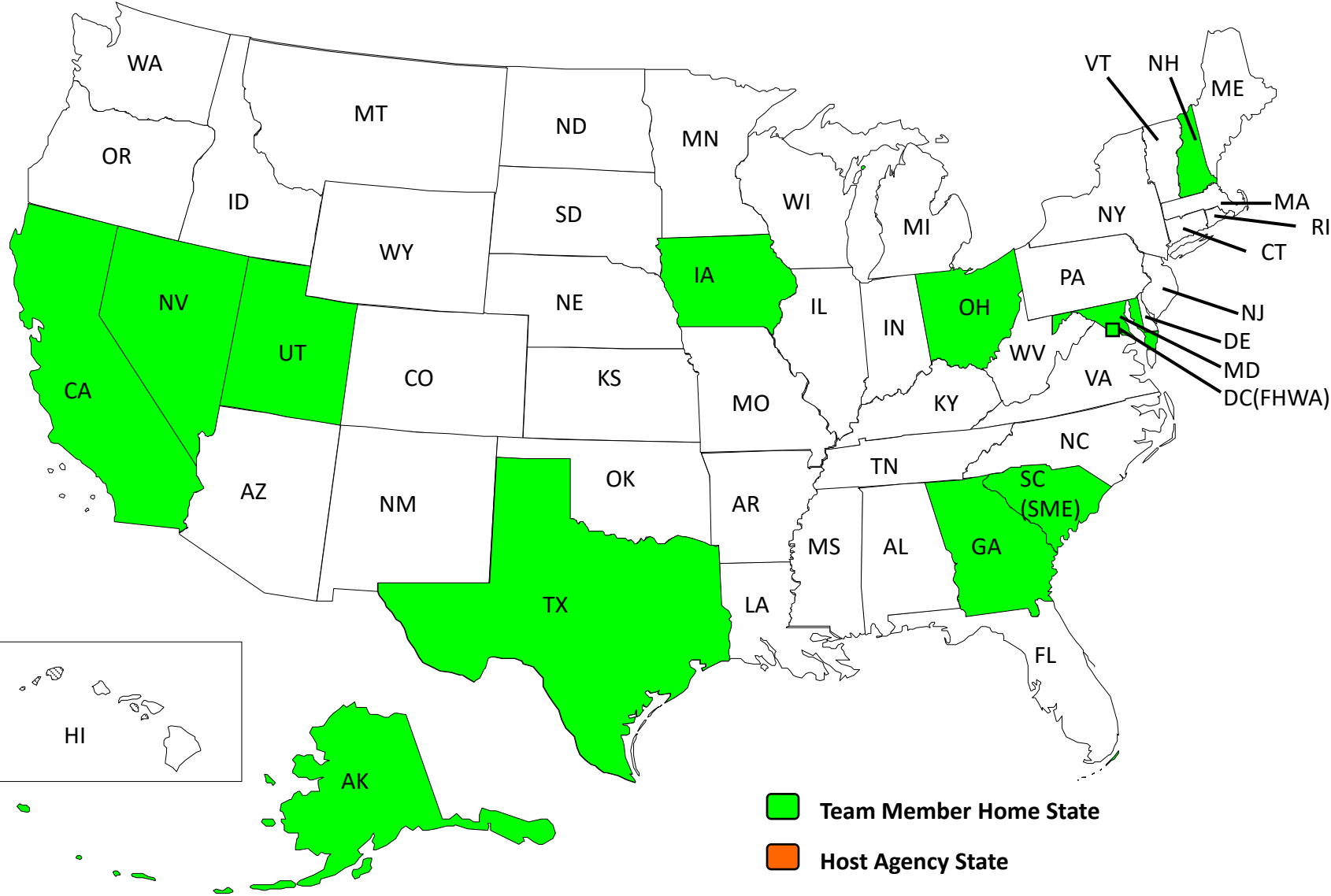
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# Scan 19-02 Team Members Home States





# Leading Practices in Strategic Workforce Management by Transportation Agencies

Strategic Workforce Plan Model

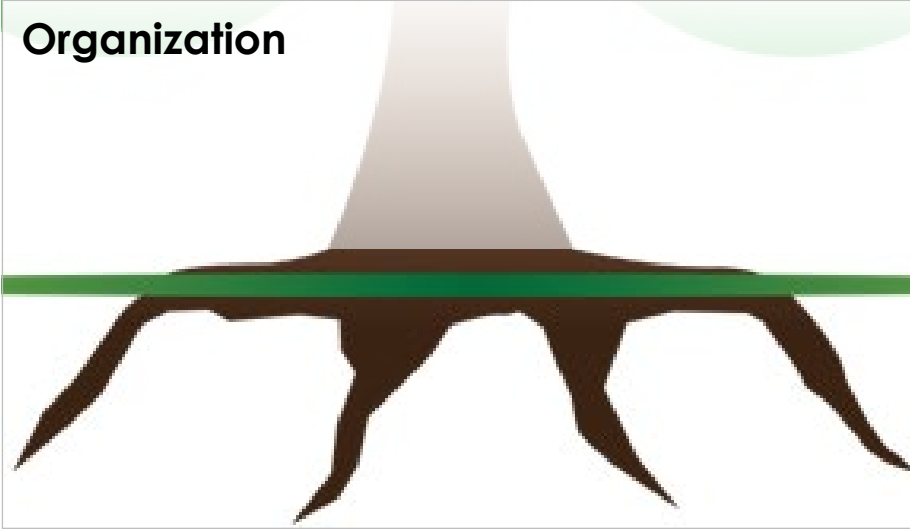
Findings

Conclusions

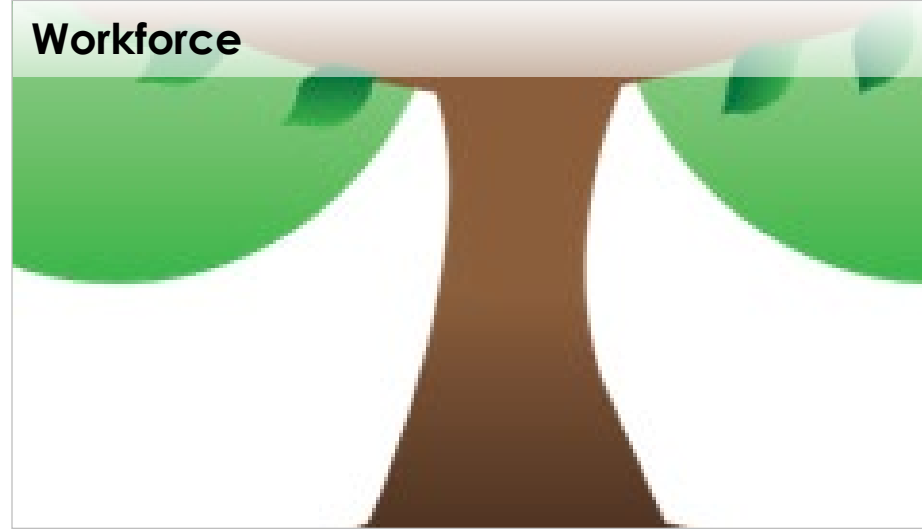
Recommendations

# Workforce Management Vision

## Organization



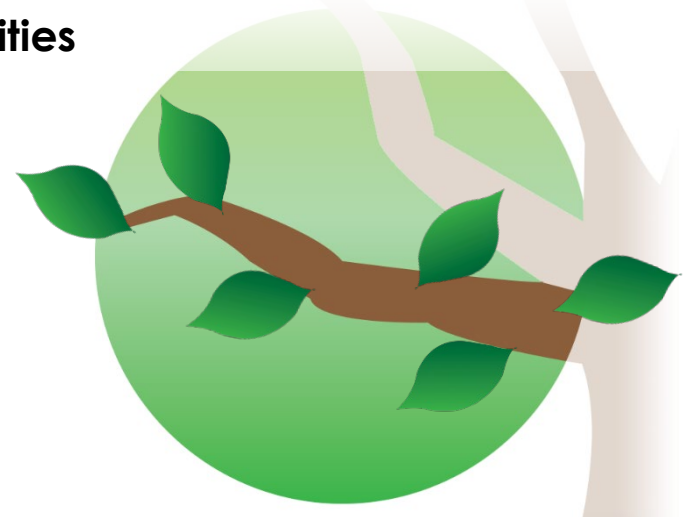
## Workforce



## Workforce Management

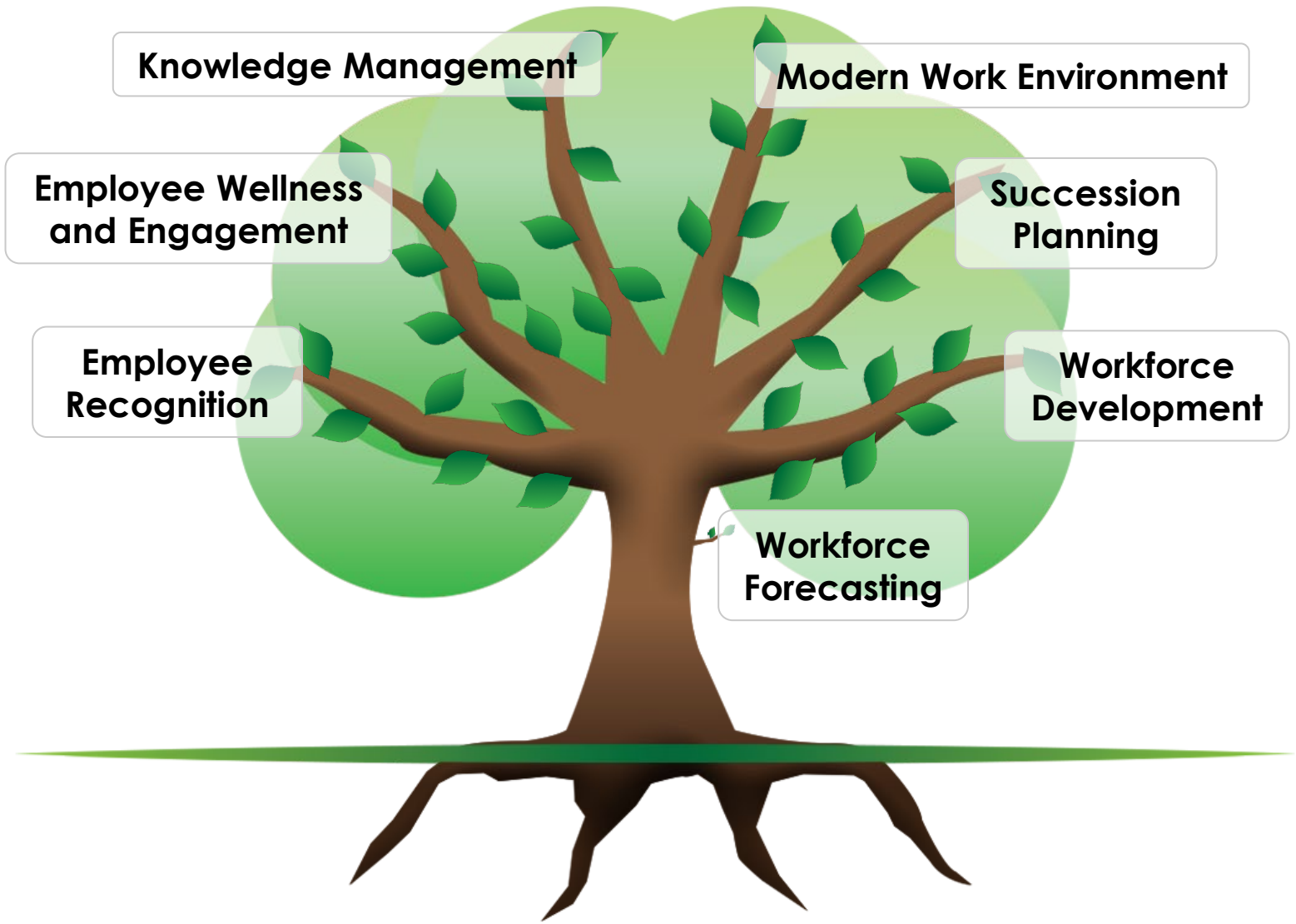


## Activities





# Plan Elements



# Modern Work Environment



# Succession Planning



Stretch  
Assignments

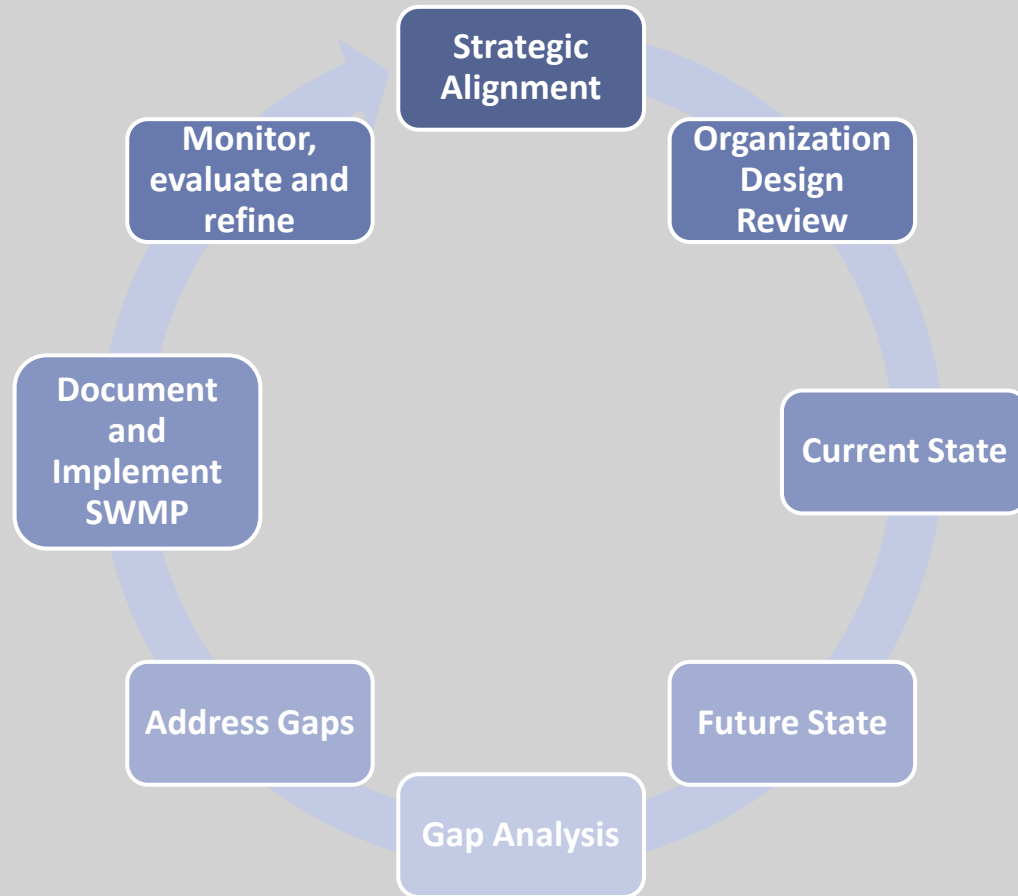
Strategic  
Recruitment

Employee  
Retention  
Program

Mentoring /  
Coaching

Resources /  
References

# Strategic Workforce Plan Model



# Workforce Management Planning Steps

Align

```
graph TD; A[Align] --> B[Conduct]; B --> C[Define];
```

## **Align with strategic direction**

- Perform SWOT analysis
- Conduct risk assessment

Conduct

## **Conduct organizational design review**

- Identify role designation
- Identify areas of above average success and places where we could realize cost and/or productivity savings or greater efficiency.

Define

## **Define current state of work, workforce, and workplace**

- Analyze retirement, turnover, and retention data.
- Analyze internal factors such as organizational culture and education and skills development.

# Workforce Management Planning Steps

## Identify



```
graph TD; A[Identify] --> B[Perform]; B --> C[Develop];
```

### **Identify future state of work, workforce, and workplace**

- Identify top workforce and industry trends and disruptors impacting agency's future.
- Analyze external factors such as pending legislation, new technologies, and shifting societal priorities.

## Perform

### **Perform gap analysis between current and future states**

- Prioritize organization's business and workforce needs.
- Identify gaps between the current state and desired future state.

## Develop

### **Develop strategies to address identified gaps**

- Develop recruitment and retention programs, succession planning activities, learning and development events, etc. to address the priorities and activities identified in Step 5 in order to close the gaps.
- Engage employees at all levels.

# Workforce Management Planning Steps



## **Document and implement the SWFP**

Develop implementation timeline to support Step 6 – look for areas that will have the greatest impact.

Identify champions across the organization.



## **Monitor, evaluate, report, and refine the SWFP**

Monitor, track, and record outcomes and results from the various elements of the SWFP.

Report results and outcomes from the SWFP, including established performance metrics, on a recurring schedule such as quarterly.

# Select Findings

No “one size fits all” approach to workforce management.

Developing and implementing a strategic workforce management plan requires effective change management.

Peer exchange is a good way to kick off a workforce management plan.

Technology plays a key role in workforce management.



# Select Findings

It is important to have key metrics to measure the plan's success.

Involve employees at all levels when developing a workforce management plan.

Developmental readiness may be a better predictor and more useful approach than performance management.

Leadership plays a key role in workforce management.

# Select Findings

Modern work environment includes considerations for recruitment, engagement, retention, and facilities as well as strategies for workplace flexibility (e.g. telework).

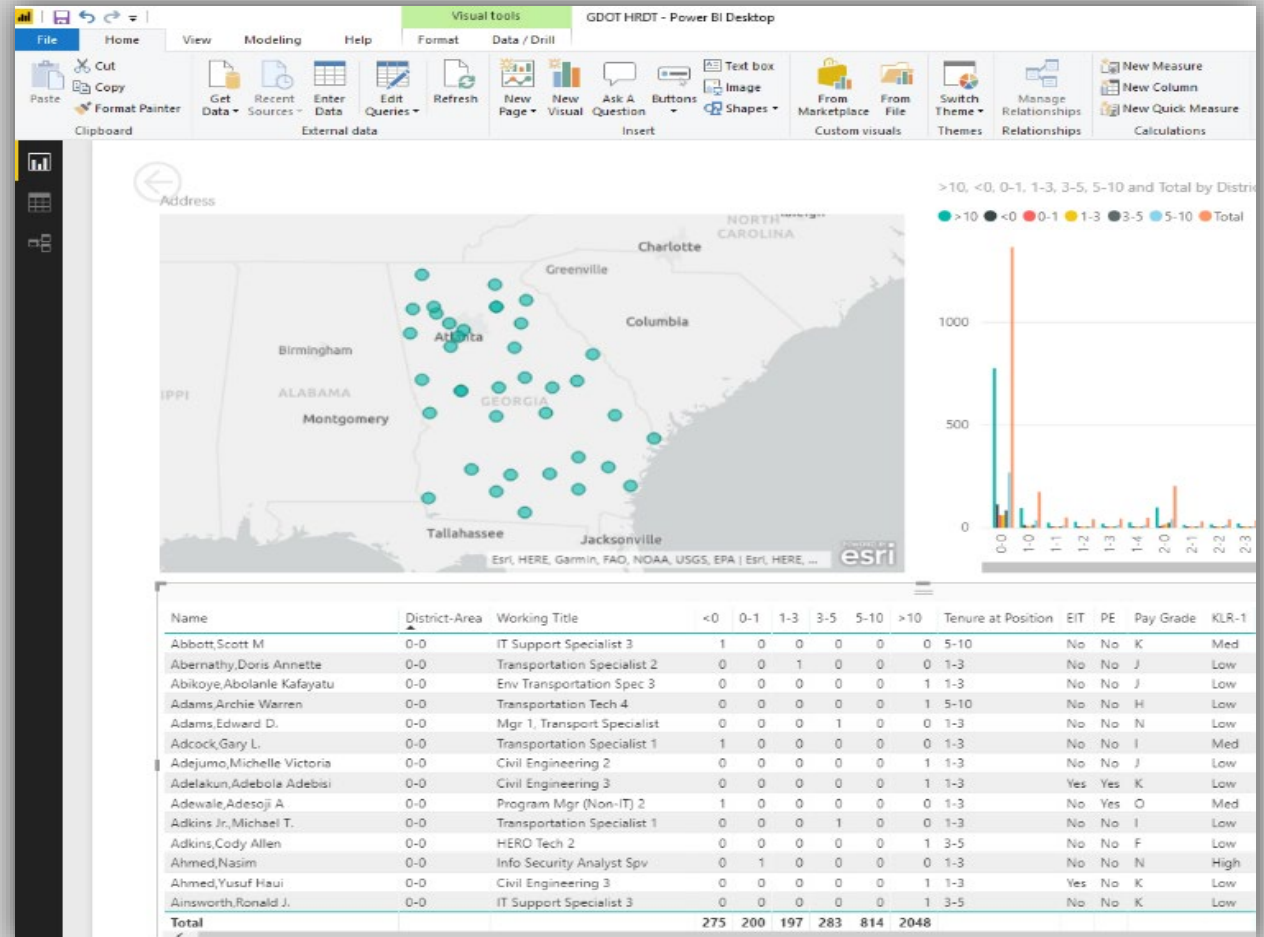
Workforce asset management – employees are most valuable asset, if not retained we lose that investment.

Retention strategies are needed for current workforce.

Competency models assist with recruiting and career path.

# Sample Success Stories

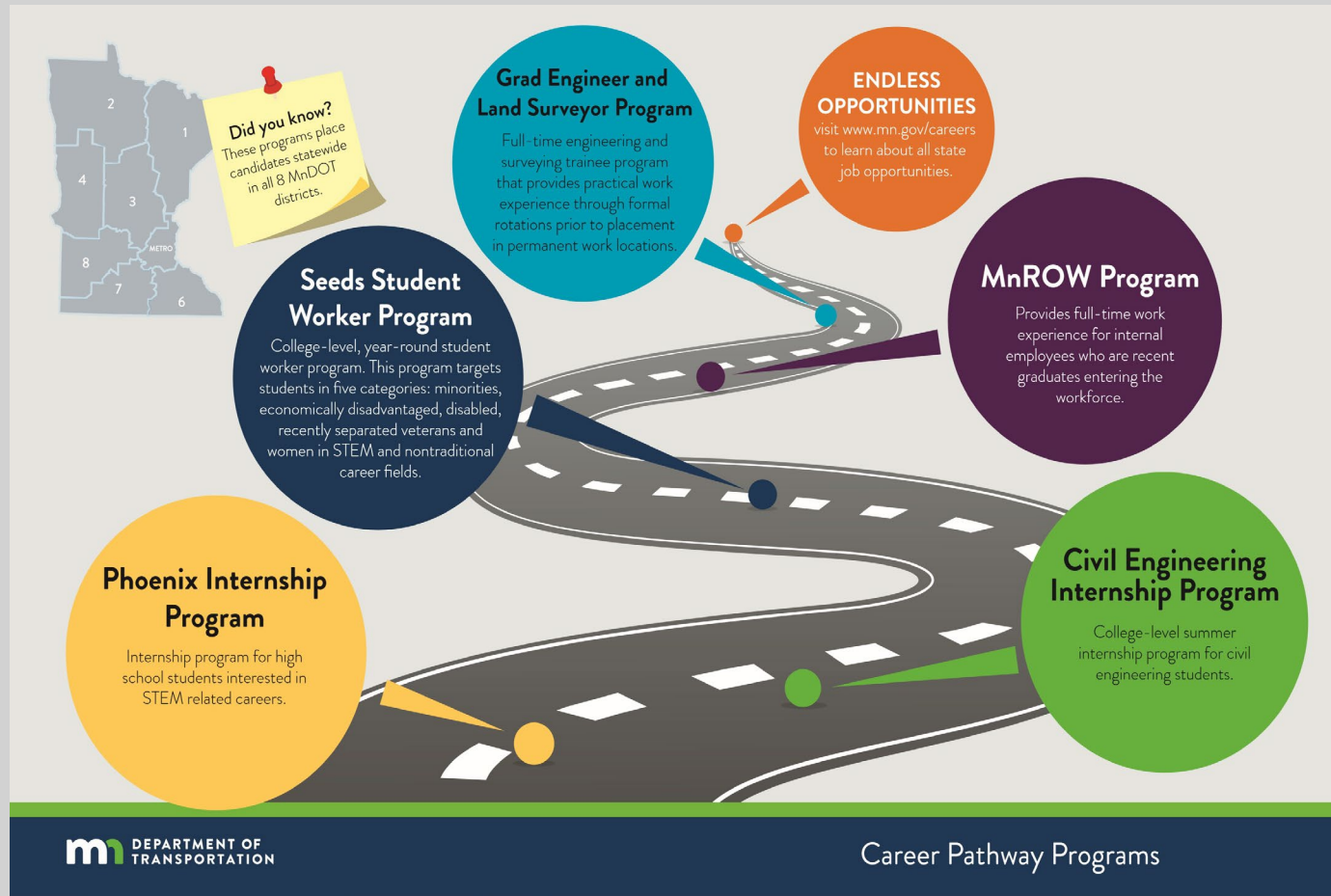
Retirement  
projections  
from workforce  
data analysis  
tool



# Sample Success Stories



## Career Pathways Program



# Sample Success Stories



“Be an employer of choice, creating a modern workforce while attracting and retaining quality workers to deliver our legislative, regulatory, and service requirements.”

## Workforce Development

### Strategies

- **Talent Pipelines** – find the best possible talent for WSDOT
- **Workforce Analysis and Growth** – evaluate systems to achieve and maintain competitive compensation and career path development
- **Employee Engagement** – listen and act on employee feedback
- **Modern Work Environment** – implement initiatives to attract and retain our workforce
- **Talent Development** – invest in our staff through training and other opportunities



# Conclusions

Effective leadership

Needs to be promoted through training and feedback.

WFP Elements

Develop elements of workforce plan used by state DOTs.

Peer exchanges

Peer exchanges supporting strategic workforce planning should be promoted.

Comprehensive workforce plan

Programs vary by structure, content and internal versus external.

# Conclusions

Data Driven

Data-driven decision-making helps drive strategic plan including strategic workforce initiatives.

Communication Plan

Develop communication plan early.

Context-sensitive  
Solutions

Develop solutions that take into account : unions, demographics, social unrest, legislative constraints, etc.

Short- and Long-Term

Apply transportation planning approach to workforce management planning.

# Conclusions

Diversity

There is a need to include diversity to get the skills we need in the workforce.

Asset Management

Approach like asset management to help leadership understand - e.g. business value analysis, quantify cost of investment in hiring/talent management.



# Recommendations

## Develop Strategic Workforce Plan (SWMP)

- ✓ Develop a SWMP using the elements presented in the report.

# Recommendations

## Strategic Alignment

- ✓ Align the workforce plan to the organization's mission and strategic goals to achieve maximum results.

# Recommendations

Investigate external resources to support development of strategic workforce management

- ✓ Raise awareness of peer exchange options (e.g. SP&R, AASHTO Research & Innovation group).
- ✓ States interested in developing a workforce plan may engage in formal peer exchange.
- ✓ Optimize AASHTO (Portal), NTTD (Base Camp), SHRM online knowledge sharing and meeting opportunities.
- ✓ Leader development programs (e.g. AASHTO, WASHTO, etc.).

# Recommendations

## Develop Business Case

- ✓ Develop a long term, durable strategy supported by leadership even through turnover/changing circumstances.

# Recommendations

## People Resource

- ✓ Recognize people are the most important resource.
- ✓ Planning and managing that resource is key to organization's success.
- ✓ Prioritize workforce management with the same sense of urgency as traditional enterprise asset management.

# Recommendations

## Identify Strategic Workforce Management Champion

- ✓ Identify who is responsible for strategic workforce management (make sure it has a home – who is champion; based on context).

# Recommendations

## Establish an AASHTO Workforce Management Task Force

- ✓ Review role of workforce asset management and its function in organizations.
- ✓ Incorporate strategic workforce management into AASHTO formal leadership development.

# Recommendations

## Publish Strategic Workforce Management Guidebook

- ✓ AASHTO should develop and publish a strategic workforce management guidebook for DOTs.



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# Workforce Readiness



Employers constantly face challenges of preparing for success in the future.

Employers frequently are compelled to consider how best to acquire, prepare, re-equip, replace, reconfigure, adapt, or otherwise alter the nature of their workforces for future success.

Source: Guzzo, R.A.. (2019) Workforce readiness in times of change. *Workforce readiness and the future of work*. Routledge, Taylor and Francis Group, New York.

# Workforce Demographics



Workforce continues to age



Workforce is becoming more diverse

*"If 70 is the new 50, we shouldn't be surprised to find more 70-year-olds working."*

- P. Buckley, D. Bachman

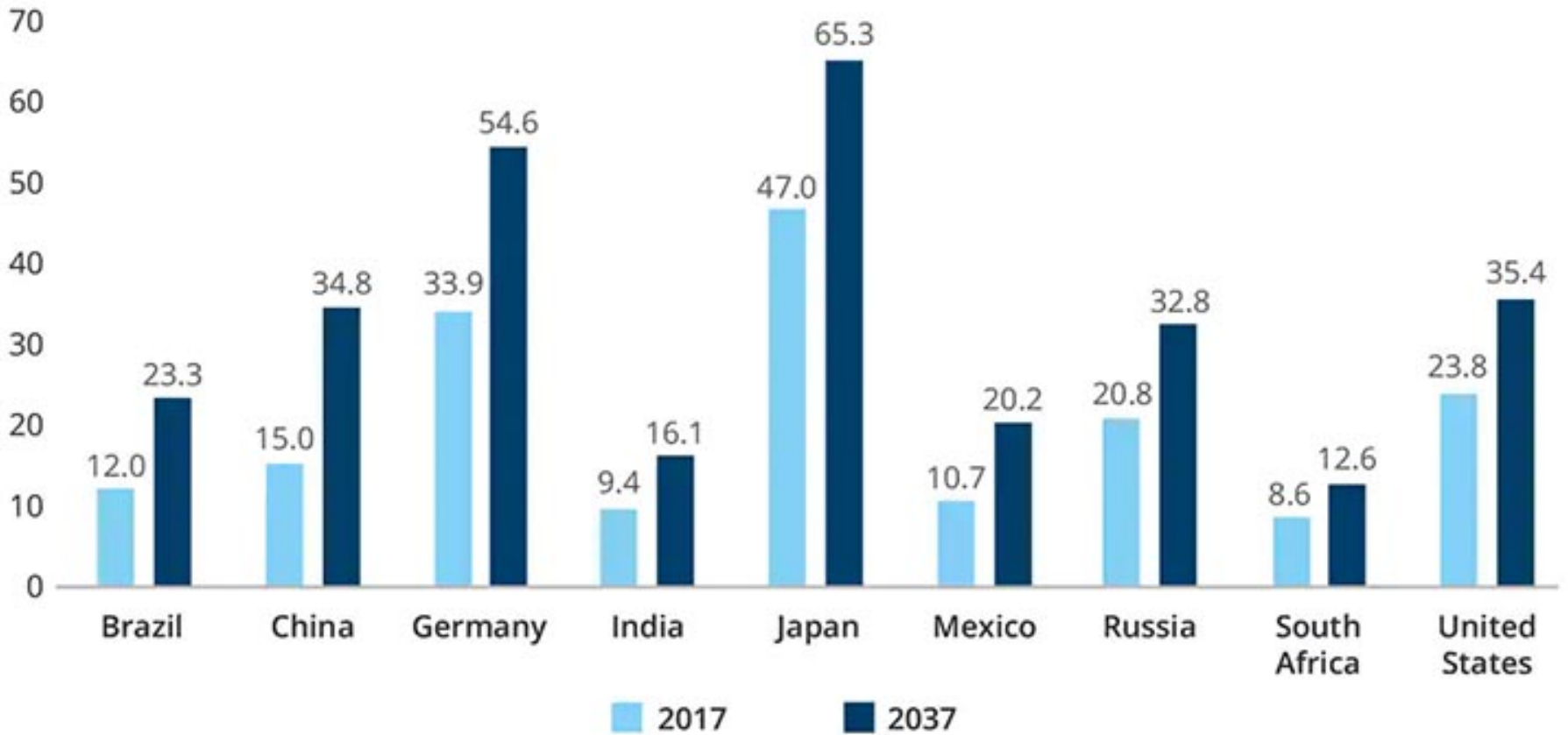
Source: Buckley, P., Bachman, D. (2017) Meet the US workforce of the future, Issue 21, Deloitte review.  
<https://www2.deloitte.com/insights/us/en/deloitte-review/issue-21/meet-the-us-workforce-of-the-future.html>

U.S. Domestic Scan Program

April 2021

### Figure 7. Retiree dependency ratios, selected countries

Number of retirees per 100 working-age people



Source: US Census Bureau; International Data Base.

Deloitte University Press | [dupress.deloitte.com](http://dupress.deloitte.com)

Source: Buckley, P., Bachman, D. (2017) Meet the US workforce of the future. Issue 21, Deloitte review.

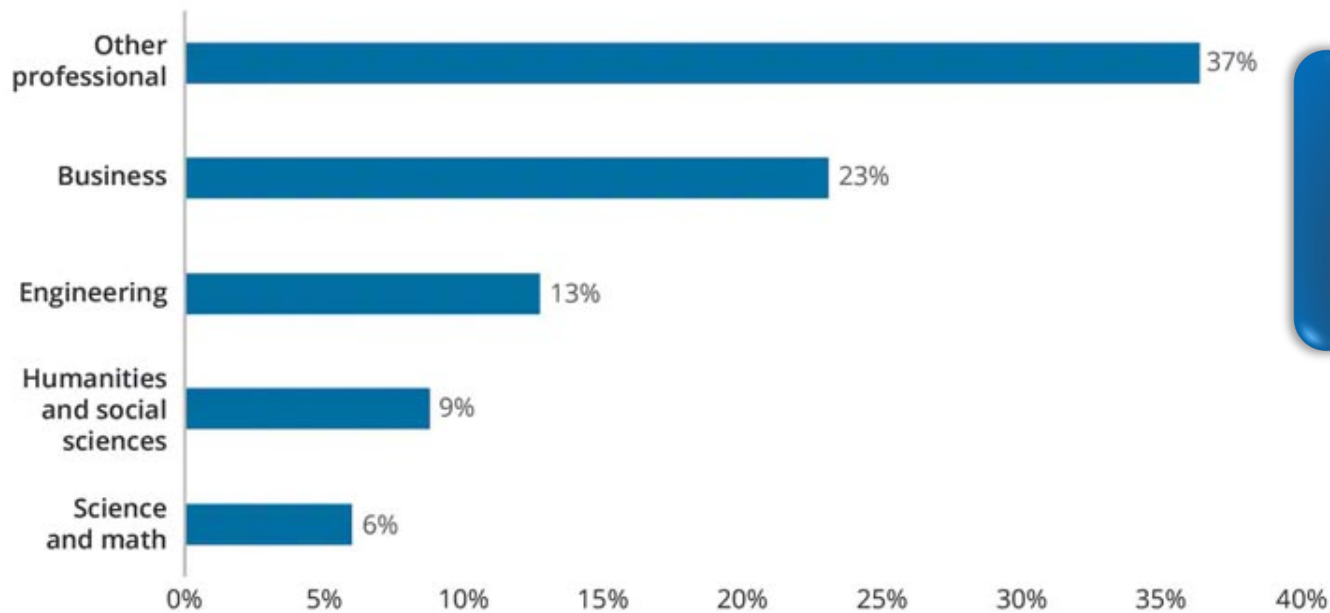
<https://www2.deloitte.com/insights/us/en/deloitte-review/issue-21/meet-the-us-workforce-of-the-future.html>

**Table 3. Change in educational attainment by level: History and forecast**

	High school or less	Some college/ associate degree	Bachelor's	Advanced
2005	45%	26%	19%	10%
2015	42%	26%	21%	12%
2025	36%	28%	23%	13%

Source: US Census Bureau, *Current population survey: 2015 annual social and economic supplement*; Deloitte calculations.

**Figure 3. Degrees conferred by major, 2014–2015, share of total**



Source: US Department of Education.

Americans are becoming more educated

Source: Buckley, P., Bachman, D. (2017) Meet the US workforce of the future. Issue 21, Deloitte review.

<https://www2.deloitte.com/insights/us/en/deloitte-review/issue-21/meet-the-us-workforce-of-the-future.html> 37

# Projected Workforce Trends

New skill sets – technology and digitalization will impact workforce

 Minnesota Department of Transportation  
17 mins -

Ice breakers are one of MnDOT's newest advancements in winter maintenance.

The idea for the design came from the Alaska Department of Transportation & Public Facilities—folks who know a thing or two about ice. Carbide-tipped rollers slice through compacted snow and create holes. The broken up ice is then scraped away by an underbody blade. MnDOT currently has 11 ice breakers that are shared across the state as needed.



Source: Securing America's Future Energy (2018) America's workforce and the self-driving future. [https://avworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future\\_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf](https://avworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf)

Gig Economy

Source: Campion, E. (2019) The gig economy: an overview and set of recommendations for practice. <http://www.siop.org/Portals/84/docs/White%20Papers/Gig.pdf?ver=2019-06-04-161253-170>

Computer, math and science jobs will grow at ½ the rate of health care

Continued split into highly skilled, well-paid professional and poorly paid, low-skilled jobs

Fewer middle-skilled, moderate-pay jobs

Source: Buckley, P., Bachman, D. (2017) Meet the US workforce of the future. Issue 21, Deloitte review. <https://www2.deloitte.com/insights/us/en/deloitte-review/issue-21/meet-the-us-workforce-of-the-future.html>

# Factors of Decent Work

Access to adequate healthcare

Adequate compensation

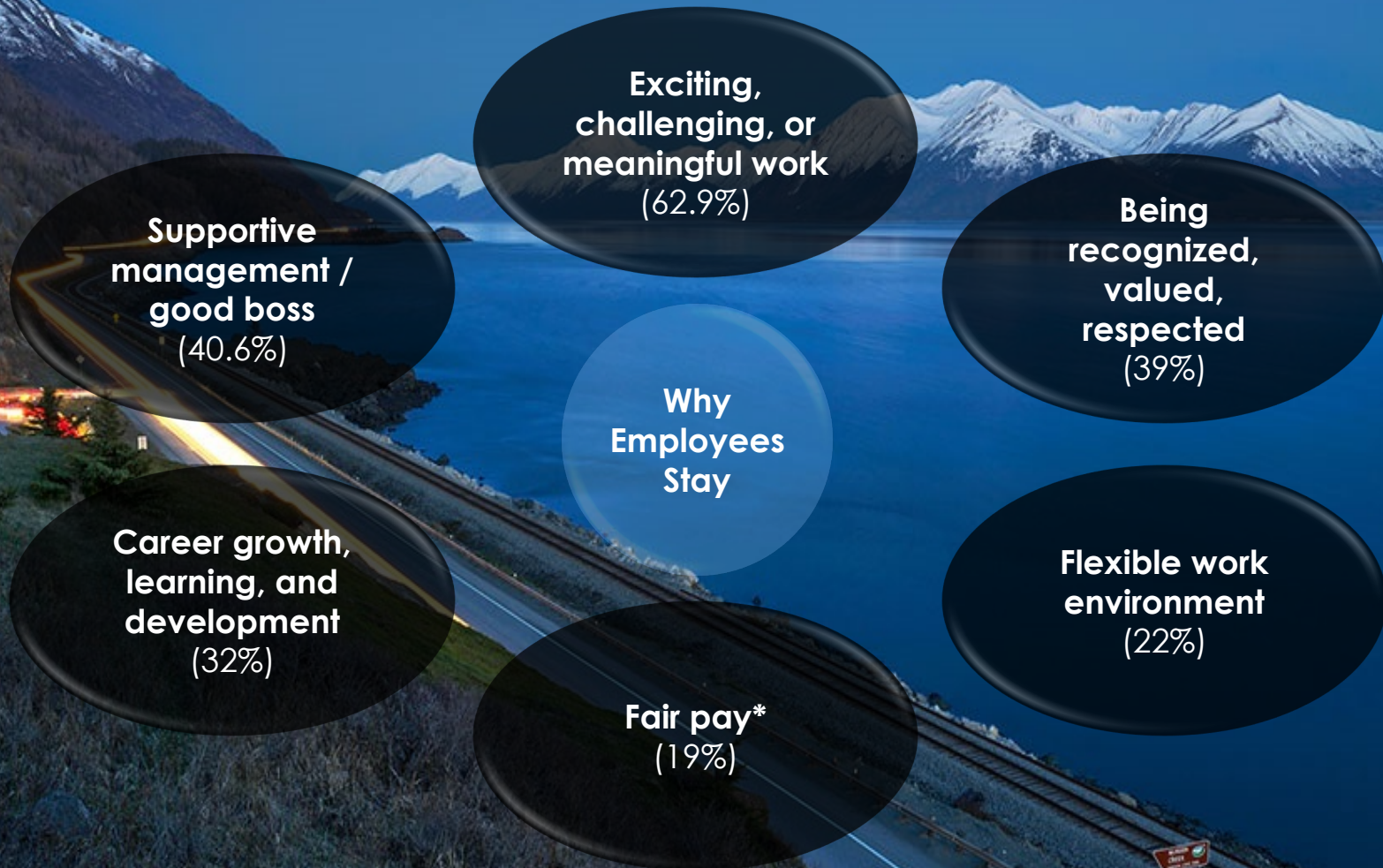
Work hours that allow individuals  
the have free time and rest

Organizational values that are in line  
with personal and social values

Work environment that promotes  
interpersonal and physical safety



# Stay Factors



\*pay may seem fairer when the other five factors are present



# Workforce Best Practices

A photograph of a construction worker wearing a blue baseball cap and a black t-shirt, focused on his work. He is in a workshop or construction site, with various materials and tools visible. The background shows a wooden shelf with a roll of blue material and some tools. The worker is looking down at a large pile of dark material, possibly gravel or aggregate, which is being processed or prepared. The scene is well-lit, and the overall atmosphere is one of industriousness and precision.

Use data for workforce planning and identifying shifting demographics

Develop cross-generational and diverse talent pipelines

Offer opportunities for lifelong learning and reskilling

Develop talent strategies for workforce segments at all ages and at different stages of their career

# Resources

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**TCRP Research Report 194.** Knowledge Management Resource to Support Strategic Workforce Development for Transit Agencies

**Knowledge Management Guide.** West Virginia Department of Transportation



*Girl makes the grade! In front of Southcoast Region building.*  
Photo by Marie Heidermann, Alaska DOT&PF 42