

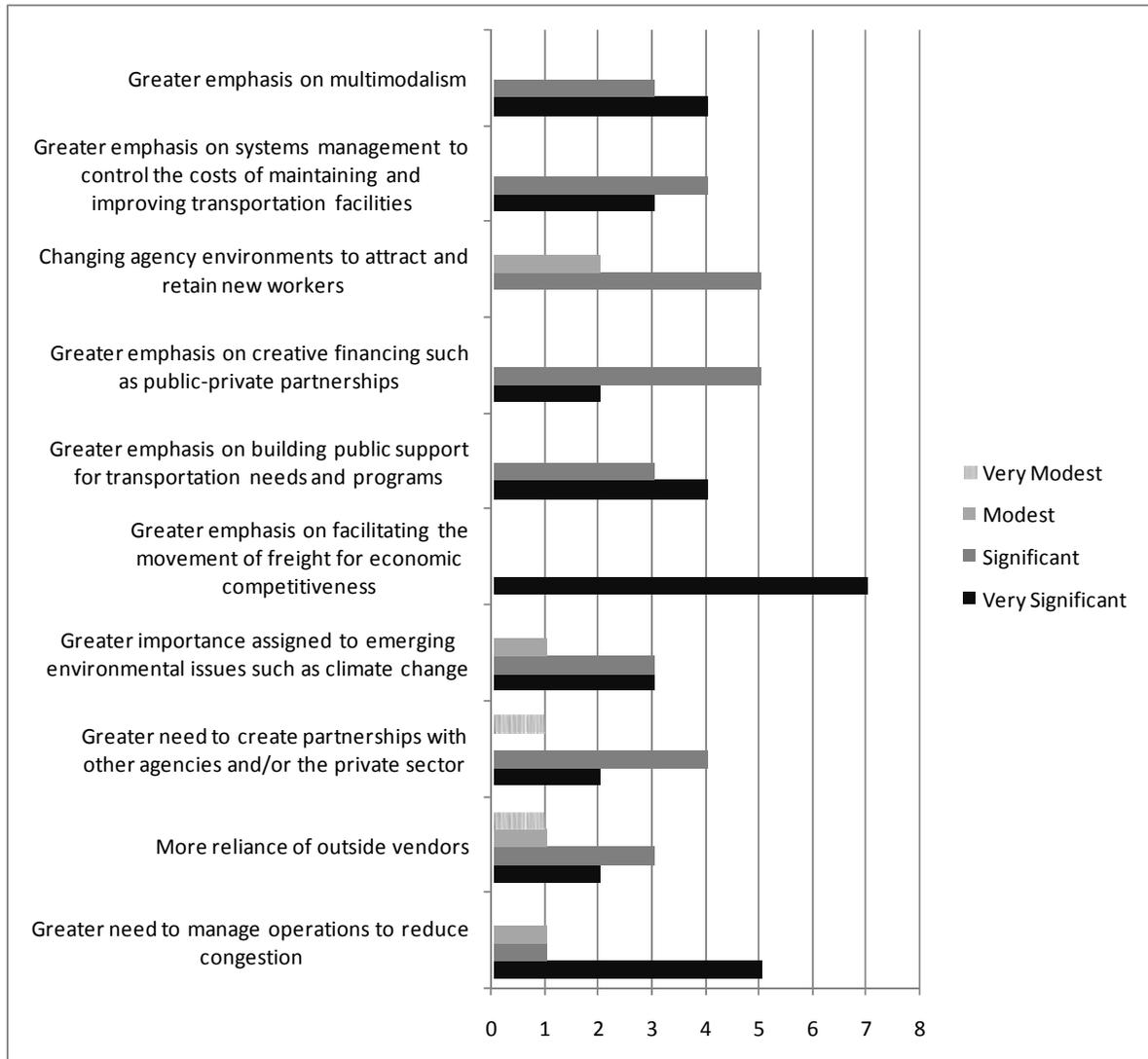
21st Century Transportation Workforce Summit

December 8-9, 2008 || Madison, Wisconsin



State Survey

1. Which state transportation agency do you represent? IA, IL, KS, MI, MO, OH, WI
2. What changes do you foresee in transportation needs and/or program operations over the next ten to twenty years?



3. If you selected "Other" in question 2 as anything but "Very Modest Change", please describe in detail.

No responses.

4. How will these changes affect the skills required in your workforce?

Broader skills will be needed forcing less specialization		4
A wider array of disciplines will be needed: environmentalists, planners, public managers, economists, electrical or mechanical engineers, public relations specialists, etc.		5
Professionals will need stronger people skills		7
Professionals will need stronger technical skills		4
Effective managers will have to be able to manage networks of activities, such as contractors, partner agencies, partner companies, etc.		7
Effective managers will have to be able to relate to a wide array of professional disciplines		6
Effective professionals and managers will have to relate positively to a wide array of public constituencies to solve problems		7
Other, please specify view		2

Other:

- a. stronger skills with respect to innovative thinking and creativity within all aspects of the transportation industry
- b. More staff resources to do the work

5. How will these changes affect the skills required in your workforce (pick the most significant)

Broader skills will be needed forcing less specialization		1
A wider array of disciplines will be needed: environmentalists, planners, public managers, economists, electrical or mechanical engineers, public relations specialists, etc.		0
Professionals will need stronger people skills		2
Professionals will need stronger technical skills		0
Effective managers will have to be able to manage networks of activities, such as contractors, partner agencies, partner companies, etc.		2
Effective managers will have to be able to relate to a wide array of professional disciplines		0
Effective professionals and managers will have to relate positively to a wide array of public constituencies to solve problems		2

6. How has greater outsourcing changed the skills required in your agency?

- Our project managers must have excellent communication and negotiation skills. They must have the technical skills to ensure work is done correctly, and the communication skills to work with the contractors and consultants to get the work produced effectively and efficiently.
- We're moving from a specialized technical and professional engineering organization to a more generalist, project or program management orientation that requires technical expertise with a broader ability to adapt, learn on the fly, manage people more effectively, and handle multiple tasks or projects simultaneously.

- The Iowa DOT has hired outside consultants in the past. Recently there has been no significant changes in the skills needed because of the use of consultants. However, there will be in the future resulting from more need in specialized areas [e.g. finance, planning, environmental (climate, clean-air) and increased regulatory/compliance].
- Greater use of design/build practices in Missouri has impacted the skill sets necessary to manage projects.
- There is more of an emphasis on contract management, which is a different role in overall project management. This results in a concern over the loss of technical skills/knowledge.
- We are not currently increasing our outsourcing. We are in fact trying to bring more work back inside. So, that forces us to focus on our EIT program to ensure that we are developing a continuous stream of new talent.
- We need more general skills as well as the ability to manage people and projects.

7. Has your agency hired people from disciplines other than the traditional areas of civil engineering, planning, IT, etc. for program purposes?

Three positive responses; four negative

8. What steps has your agency taken to provide career paths for people from these new disciplines? (pick all that apply)

None		0
Broadened supervisory and management standards to make them eligible for more senior jobs		3
Created non-supervisory/management professional career paths		3
Entered cooperative arrangements with other agencies who employ more people with these skills to allow easier movement of people or work		0
Other, please specify		0

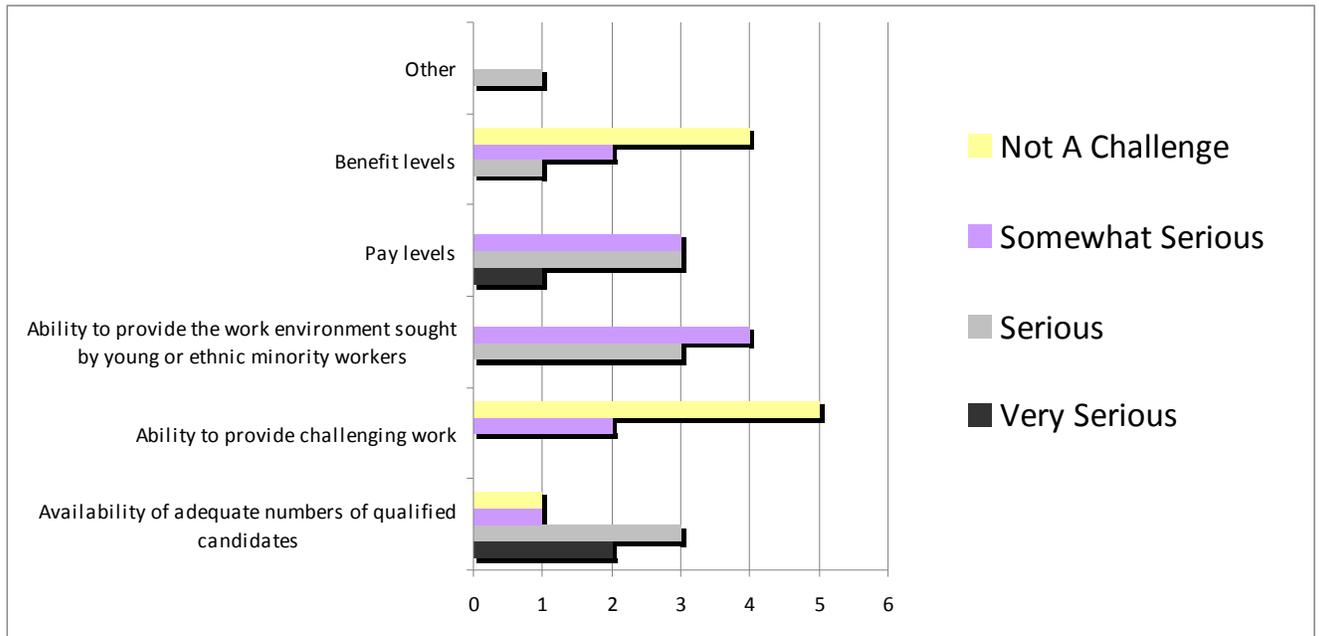
9. Has your agency hired electrical, mechanical or environmental engineers for program purposes?

Five positive answers; two negative

10. What steps has your agency taken to provide career paths for people from these new disciplines? (pick all that apply)

None		2
Broadened supervisory and management standards to make them eligible for more senior jobs		2
Created non-supervisory/management professional career paths		2
Entered cooperative arrangements with other agencies who employ more people with these skills to allow easier movement of people or work		0
Other, please specify		0

11. What challenges does your agency face in recruiting, hiring or retaining qualified workers?



12. If you selected "Other" in question 11 as anything but "Not A Challenge", please describe the challenge in detail.

- The ability to incorporate minority and female candidates with the state's absolute veterans preference law and meet the skills requirements for a predominantly professional and technical engineering organization.
- The perception of state government as an employer of choice creates serious challenges. The current economic situation for the state is resulting in the inability to fill vacancies and extreme workload for existing staff. There is also little to no travel allowed for professional development.

13. What innovative or extraordinary efforts are now being used to recruit transportation workers?

None		0
Expanded intern or co-op programs	<div style="width: 60px; height: 10px; background-color: yellow;"></div>	6
Before graduation hires	<div style="width: 60px; height: 10px; background-color: yellow;"></div>	6
Signing bonuses		0
Other, please specify view	<div style="width: 40px; height: 10px; background-color: yellow;"></div>	4

Other:

- More focused recruitment efforts and building relationships with universities outside of just the career fair schedules.
- pursuing more mid-career candidates instead of using on campus recruiting, stressing benefits and job stability with this group
- The department has hired a recruitment coordinator and is in the process of developing a recruitment and retention policy.
- Expanded scholarship programs for college students, and more off-shore recruiting efforts.

14. What innovative or extraordinary measures are being taken to retain workers?

None		1
Expanded training		4
Higher salaries		3
Greater benefits		1
Work enrichment		3
Other, please specify view		1

Other:

- performance based pay, team incentive comp., alternative work schedules, competitive medical plan, non-contributory defined retirement

15. Has your agency made any efforts to attract and retain foreign students or nationals?

Two positive answers; five negative.

16. Please briefly outline the steps you have taken to attract and retain foreign nationals.

- More aggressive recruitment of engineering or technical students in Puerto Rico and other Latin American countries as well as among Asian and African students studying in the United States.
- We have made limited attempts to sponsor employees on H1B1 visas. This process was extremely time-consuming and complicated. It did not prove to be a worthwhile effort

17. What efforts has your agency made to attract non-traditional workers: older workers, ethnic minorities, people who may desire non-traditional work schedules?

None		1
Rehire some retired employees		5
Targeted recruitment		5
Modified work policies		3
Supervisory training to make the workplace more inviting to these employees		4
Other, please specify view		3

Other:

- a. Created non-GED laborer jobs to target minority groups and offer on job time to study and take GED
- b. None.
- c. Intern programs

18. What employee development efforts does your agency use to ensure that employees have the skills needed for today and tomorrow's requirements?

None		0
In-house technical training programs		7
In-house supervisory/management training programs		7
Mentoring programs		6
Agency supported for-credit programs		6
Other, please specify		0

19. What role do educational institutions in your state have in meeting development needs?

None		0
Develop and offer courses for the agency		5
Partner in assessing needs and defining responses		3
Manage training programs for the agency		2
Create and offer degree or certificate programs based on agency needs		2
Other, please specify view		2
a. Delivery of some training programs		
b. We partner with an institution to obtain credits for courses developed in house.		

20. What efforts has your agency made to encourage students in K-12 to take an interest in math and science or transportation?

- We have a large outreach program that includes speaking at K-12 schools throughout the state. We also partner with the Science Expo held at Ford Field every year. We have a strong TRAC program that partners with schools to teach science and math modules. Teaching those modules give teachers continuing education credits.
- More career day opportunities hosted by Illinois DOT; more job fair appearances at schools and other secondary school presentations designed to let students know about job opportunities for engineers and technical professionals in transportation.
- We have not had any organized efforts at this time. However, interaction with secondary education students is being discussed as a part of our recruitment plan.
- Participate in TRAC program with numbers schools in Missouri, engaged in local chamber Partners in Education program with local middle schools, offer speakers bureau that includes time in local schools, participate in AASHTO National TRAC Bridge Competition with middle school children.
- TRAC Program, Take Your Children to Work Program, Green Bay Career Expo, Program in Aviation
- We've done some work with colleges and universities that target high school age young women interested in engineering. It has been limited.
- STI participation, High School Career Fairs, Bring Your Child to Work Day, iBuild Construction Career Days, Job Shadowing for High School Students and undecided college students

21. Who in your agency is primarily concerned with the future workforce issues?

No one		0
Senior management		4
Middle management		0
Supervisors		0
HR professionals		3

22. Who in your agency is primarily charged with developing strategies to meet future workforce needs?

No one		0
Senior management		2
Middle management		0
Supervisors		0
HR professionals		5

23. What other insights would you offer on the topic of the 21st Century workforce, how to build it, recruit it, develop it, and retain it?

- Courses that focus on moving goods and people effectively and efficiently. We must expand the classes to include more than technical aspects of building and maintaining the infrastructure. We must include looking at a larger picture and planning for the future.
- Emphasis on general management abilities and the ability to adapt management technique based on the job at hand, as opposed to hiring based on something like a professional engineering requirement for a management job that may not actually need an engineering degree and certification.
- There will be a need to utilize technology that people entering the workforce understand and use for communication in order to recruit them to our workforce. We will also need to look at the changing needs of the workforce (flexible work schedules, use of technology [facebook, blogging, avatars, twittering, etc.], balancing work and social life, etc.). Limited English proficiency will become a greater issue relative to the need to communicate with an expanding Latino community. A stronger awareness and understanding of financial and contract management will be needed at lower levels in the organization. Integration of contact sensitive solutions including a greater awareness by staff of cultural, historical, environmental aspects and relationships.
- Continued application of innovation is critical to the future of transportation. Younger generations demand and quickly adapt to technology change and innovation and incorporate it significantly in day to day life. DOTs must adjust accordingly to keep pace in order to attract and retain future generations entering the workforce.
- Flexibility in schedule, pay and benefits; upward mobility has been limited by downsizing of management positions; use of effective knowledge transfer and succession planning techniques to deal with attrition;
- I think that HR professionals must educate the management team about the importance of work process analysis not just as a tool to classify a job but as a business tool that can result in efficiency and economic gains as it relates to the types and number of staff needed. Additionally, HR professionals must be engaged and participate in the operational side of the business in order to provide the best advice and guidance to ensure the Agency can attract the types of employees that a proposed change in operation would require.
- Being open to new strategies is important. We will need to replace a fifth of our workforce over the next few years. Attracting more young people to Transportation careers is critical.