

Conclusions and Future Considerations

The New York State government enterprise spans thousands of employees, numerous agencies, and many different public service missions, as well as geographic locations. The proficiency of the State's IT workforce helps make the enterprise run smoothly and contributes to its effectiveness. This study produced a comprehensive current profile of demographics, proficiencies, and training needs of the current state IT workforce. It also produced a comprehensive set of agency-level IT forecasts for the next three years. Together, these profiles revealed the following high-level indicators of key training and other skill-related needs for statewide and agency-level leadership attention.

First, New York has a strong foundation for moving into the future. The study documented the following positive conditions:

The IT workforce:

- has strong and pervasive management skills
- is well-educated
- is very experienced in state government and in the missions of agencies
- has high proficiency in fundamental IT skills which will remain important into the future
- is highly motivated for training

Equally important, the study showed:

- A substantial gap exists between the current proficiency profile of the IT workforce and skills that are forecasted to grow in importance in the near future.
- Infrastructure, the web, and work associated with information content present substantial challenges. Most agency CIOs forecast growing need for skills in these competency areas, but current proficiency ratings are low in all three.

Fortunately, strong convergence is evident across employees, CIOs, and state IT leaders on the types of skills that are necessary to achieve and sustain an effective IT enterprise across state government in the future. These skills represent the most fruitful areas for investment. They emerged from a comparison of low current proficiency ratings, high future need, high employee demand for training, and strategic importance to the enterprise.

Training professionals can use the data from this study to construct comprehensive development programs and coherent curricula that address the needs of workers in a variety of job specialties as well as the core competencies that pertain to all IT professionals. In addition, similarities in key needs across all types of agencies present opportunities for partnerships and economies of scale in training and professional development investments.

In addition, the data set itself is a rich resource for use in other aspects of state and agency IT planning and development, including input to:

- Labor-Management decisions on training program priorities
- IT Training Academy decisions on the design of competency-based curricula and training programs
- collective purchasing of training programs for widely needed skills
- agency-level planning and spending to optimize needed competencies
- the statewide strategic plan and technology standards
- IT-related HR functions (such as recruitment and retention)

Finally, the study results also suggest areas for future investigation and leadership attention in the areas of workforce development, training program design, and enterprise IT planning.

Skill proficiency affects many aspects of IT workforce development. These aspects include assessing the relationship between job advancement and technical proficiency as well as the role education and skills assessments could play in recruitment. Other topics include the usefulness of a skills orientation to IT succession planning and better understanding of the relationships among training, employee satisfaction, and retention.

Training and other professional development programs would benefit from further evaluation. Future considerations for the design of learning opportunities include determining the effectiveness of formal education compared to skill-oriented training, as well as understanding the effectiveness of various methods and combinations of methods for achieving different competency goals. Another consideration is the possibility of identifying core competencies and ideal specialization profiles to help set priorities. In addition, consideration could be given to policies and methods for coordinated purchasing of professional development programs.

Conclusions and Future Considerations

An important relationship exists between skills and the effectiveness of the IT enterprise. Future exploration in this area might include better understanding of how organizational culture and policies affect proficiency levels, consideration of current and needed skills in the process of selecting agency and statewide IT standards, and explicitly incorporating skills considerations into organizational strategies for moving to higher levels of IT effectiveness.
