

Succession Planning for SAS® Programmers

Thomas J. Winn, Jr.

State Auditor's Office, Austin, Texas

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Abstract

In any organization, succession planning is essential for the continuation of operations following the anticipated or unanticipated absence of employees with critical knowledge and skills. A succession plan would provide for the cross-training of existing employees to cover temporary absences, as well as the development of strategies to address inevitable permanent staff changes due to retirement, death, or other types of employee terminations. A succession plan should include the following items:

- (1) identification of the potential service risk to the organization, taking into account the organization's future goals and objectives;
- (2) preparation of a schedule of the recurring critical tasks to be performed, and identification of the non-recurring, ad hoc critical tasks, along with identifying the competencies (special knowledge, skills, and abilities) needed to perform them;
- (3) documentation concerning the pertinent computer programs and application systems, including data maintenance procedures; and
- (4) a proposed implementation schedule of training and "knowledge-transfer" sessions.

The need for succession planning applies to the organization's SAS programmers, as well as to its other important professional personnel. This presentation will discuss succession planning, as it relates to SAS programmers.

Introduction

Demographic statistics are not available concerning SAS programmers in the national, state, or local workforce, so estimating the service risk for a typical organization in our economy from SAS programmer losses is not possible. However, using the government personnel systems for the State of Texas, the author estimates that 34.4% of all information technologists (systems analysts, programmers, database administrators, network specialists, and computer operators) working for non-higher education agencies of the State of Texas are over 50 years of age. Moreover, 8.5% of all of the State's information technologists are eligible to retire now, 24.2% of the State's information technologists will be eligible to retire within the next 5 years, and 46% of the State's information technologists will be eligible to retire within the next 10 years. Furthermore, those statistics also seem to be generally true for the State Auditor's Office (SAO): 7.1% of our 28 information technologists are eligible to retire now, 21.4% within 5 years, and 53.6% within 10 years. More particularly, the SAO has 5 SAS programmers, one of which is eligible to retire now, 4 of them within 5 years, and all 5 within 10 years. What are the numbers like where you work? Chances are, if your employer hasn't yet recognized the potential problem of losing very many of its most experienced, and most technically-

capable employees, eventually it will. Don't wait until your SAS experts are all gone, it will be too late then. Start planning now!

Where to Begin? First, identify the Service Risk.

The first step would be to identify the potential service risk to your organization. With what you know, or can find out, about your organization's SAS programmers, assess the likelihood of possible short-term and long-term losses in support. What tasks and systems are the SAS programmers at your workplace responsible for? Given your organization's future goals and objectives, is there a need for those tasks and systems to be continued into the future? What would the consequences be to your organization of an interruption or cessation in those tasks or systems? Are there any known health or family circumstances of the techies which could make your organization vulnerable? What are the leave and retirement intentions of your SAS analysts? Do the members of your SAS programming staff each have distinct specialties, or have they been cross-trained into each others' areas of responsibility? If cross-training has occurred, is it consistent with likely future succession needs? Are other human resources readily available (other employees, former employees, or consultants) which could be brought-in to provide useful programming support in an emergency?

Identify Critical Tasks.

An assessment of the organization's vulnerabilities to succession failures would consider the work responsibilities of its professional SAS programmers. Some of those responsibilities may be of a regular, recurring nature, while others may be more ad hoc, that is, performed on an irregular basis whenever required for a particular purpose. A critical task is one that is essential to the attainment of the organization's goals and objectives. A detailed job description may help to identify many of the most important tasks, but it also is useful to know about the frequency and timing of performing those tasks, and the data sources and computer programs that are used. Prepare a temporal schedule of the recurring tasks, identifying the particular data products produced, the intended recipients of the results, and when they are completed. Note any sequential dependencies (such as, "task B must be completed after task A, but before task C"). Finally, what are the knowledge, skills, and abilities needed to perform the critical tasks? Specifically, what level of knowledge of SAS is needed (which SAS System components, which PROCs, how much macro knowledge, ODS, any required familiarity with SCL program code, OLAP cubes, etc.); how much other programming knowledge is needed (SQL, HTML, JavaScript, C, C++, .NET, etc.); should the succession candidate possess any particular certifications, and is any special subject matter expertise required?

Gather Documentation.

Prepare technical documentation concerning all of the computer programs and application systems that pertain to critical tasks for which the SAS programmer is responsible. At a minimum, the documentation should include complete

descriptions of procedures followed, the locations of pertinent data and program code, well-commented program listings, descriptions of input files and program outputs and, if multiple programs are used, diagrams illustrating the structure, relationships, and processing flow of the programs. The documentation also must include a step-by-step description of procedures to be followed for updating the data used by the application.

An Intermediate Step – Compare Alternatives and Make a Decision.

After the critical tasks have been identified, but probably before all of the program documentation has been completed, someone must consider alternatives for finding one or more succession candidates, and then decide. Who will make the decision -- the outgoing professional, a senior manager, or a committee? Will the succession candidate be “promoted” to the position from within the organization, or will someone be recruited from outside of the organization, or will the outgoing professional’s duties be split-up among several existing employees (thereby adding to their duties – there are obvious limitations on how often this strategy can be applied)? Or will the succession position be “outsourced” to another entity?

Prepare a Training Plan.

Develop a formal training plan for the succession candidate(s). Ideally, the succession candidate(s) will begin learning about their new responsibilities months, or even years, before the departure of the outgoing SAS programmer. If this is practicable, then the transition from the outgoing professional to his/her successor(s) should be a relatively smooth process. An advantage of this approach is that there could be time for progressive knowledge-transfer sessions, and also for a gradual shifting of responsibilities to the successor(s). If the succession candidate(s) needs to take training classes, either to acquire new knowledge or to develop new skills, then that formal professional development should be undertaken at the earliest opportunity, in advance of when the classes actually are needed. Set up a timetable for the training and knowledge-transfer sessions. The schedule should reflect both the priority and the hierarchy of the knowledge to be transferred to the successor(s).

Conclusion.

A very large number of SAS programmers are rapidly approaching the end of their employment, and for a variety of reasons or other opportunities. The goal of succession planning is to provide for the continuity of expert technical support for attainment of the organization’s goals and objectives, following the departure of an experienced employee. The succession planning steps are:

- (1) identification of the potential service risk to the organization, taking into account the organization’s future goals and objectives;
- (2) preparation of a schedule of the recurring critical tasks to be performed, and identification of the non-recurring, ad hoc critical tasks, along with identifying the competencies (special knowledge, skills, and abilities) needed to perform them;

- (3) documentation concerning the pertinent computer programs and application systems, including data maintenance procedures; and
- (4) a proposed implementation schedule of training and “knowledge-transfer” sessions.

Resources for Further Study.

State Auditor’s Office, Appendix B, “Succession Planning and Knowledge Management”, Workforce Planning Guide 2006 Edition, Report No. 06-704, February 2006, pp. 13-15.

Author Information.

- Tom Winn, Ph.D.
Senior Systems Analyst
Texas State Auditor’s Office
P.O. Box 12067
Austin, TX 78711-2067
- Telephone: 512 / 936-9735
- E-Mail: twinn@sao.state.tx.us