

Memorandum

TO: Chief Information Officer, State of Oregon
FROM: Catherine Susman
DATE: October 24, 2021
RE: Survey of Agency Personnel on the Effectiveness of and Satisfaction with the Stage Gate Process

Background & Purpose

In the mid-1990's, the State of Oregon experienced a catastrophic, state-wide failure of an information technology ("IT") project that cost the state \$123,000,000 (GoLocalPDX News Team, 2014). In spite of additional regulations put in place in the late 1990's, in 2014, the State of Oregon experienced another catastrophic, state-wide failure of an IT project which cost the state \$240,000,000 (Manning, 2016). In an effort to prevent further catastrophic IT project failures, in 2015, the Oregon legislature passed new statutory mandates for technology projects over \$1,000,000. Under those regulations, the Office of the State Chief Information Officer ("OSCIO") now oversees all such technology projects (ORS 276A.200 - 276A.236). Further, in 2018, based on its new statutory authority, OSCIO adopted a new statewide policy for managing and approving technology projects, now commonly known as the "Stage Gate" process (OSCIO Statewide Policy 107-004-130). While this new oversight and process has been in place for a few years, there has not been an analysis of the efficiency and effectiveness of the new Stage Gate process in ensuring successful IT projects.

In order to determine if the Stage Gate process is effective in preventing additional IT project failures, OSCIO should undertake an analysis of the effectiveness of the Stage Gate process including a survey of agency personnel that have used the process. A survey is recommended in addition to an analysis of the secondary data the OSCIO received as part of the Stage Gate process. Agency personnel are an integral component to the success of any IT project. How well agency personnel understand the required processes, how well they are able to utilize those processes, and their perception of the processes will play a part in the overall effectiveness of the process. The purpose of the proposed survey, therefore, is to determine how well agency personnel understand and derive benefit from the Stage Gate process as well as whether such personnel are satisfied with the process and view it as effective.

Population

While analyzing the performance of the Stage Gate process for all subject IT projects is important, for the purposes of this survey, the focus is on the highest risk IT projects. The oversight Stage Gate process was set up in response to avoiding catastrophic failures, so the first analysis should be to determine effectiveness of the process for those high-risk projects. The population in question, therefore, are agencies that have implemented an IT project, where the project was subject to Stage Gate Level 3 oversight (i.e. the IT project either: (i) cost of \$1 million or greater; or (ii) included a cloud component and confidential, restricted data) (OSCIO, 2020).

The agencies comprising this population can be precisely identified by analyzing the Stage Gate data the OSCIO has collected from those agencies. All agencies that are required to participate in the Stage Gate process must submit data about the IT project, the agency and agency personnel working on the IT project through the OSCIO's electronic, web-based project and portfolio management system (the "PPM") (OSCIO, 2020, p. 3). The PPM, therefore, will allow for identification of the agency population by querying all IT projects subject to Stage Gate Level 3 oversight.

Sampling Plan

In administering the survey, rather than utilizing a sample, a census should be undertaken. The Stage Gate process was implemented only a few years ago in 2018. Further, of those agencies that have had an IT project after the implementation of the Stage Gate process, only a small subset of those projects fell within Stage Gate Level 3 oversight. This small population as well as access to agency contact information through the PPM supports the use of a census (Remler & Van Ryzin, 2015, p. 175).

Since the population consists of organizations, the respondent(s) for each agency organization must be designated (Remler & Van Ryzin, 2015, p. 213). For this survey, up to two individuals for each agency in the population will be surveyed based on their role on the IT project. The two roles are: (1) the individual in the role of the business contact; and (2) the individual in the role of the project manager. Depending on the agency and IT project, these two roles may be filled by the same person. These two roles were chosen because they represent the agency personnel that would have been most directly involved in fulfilling the required Stage Gate Level 3 oversight processes. As noted above, the name, title and contact information for the agency personnel can be obtained through the PPM.

Survey Mode

The mode of survey data collection will be through the use of a web/online survey where an email will be sent to all potential respondents with a link to the web-based survey. The web survey will be structured so that it is accessible through either a computer, tablet, or other mobile device. This mode was chosen since there is an established contact list with full contact information including email addresses for the population (Remler & Van Ryzin, 2015, p. 221). Further, the population is sufficiently technically savvy, at least in the use of email and completion of web forms, and has the needed computer and internet access. This mode is relatively low cost and relatively fast (p. 221). Use of the web-based survey mode will allow for the data (i.e., survey responses) to be immediately stored in an electronic database (p. 221). The immediate input and storage of the data can allow for real time review of the data as well as more easily allow for further analysis of responses (p. 221).

While the survey mode will be a web survey, the initial contact to the population will be via regular mail notifying the respondents that they will be receiving email with the survey and providing a brief explanation of the survey. The initial mailed invitation will help reduce the possibility of the email being seen as junk mail and ignored. This initial hard copy mail outreach will help reduce the traditionally high non-response rate on web surveys. To further help boost response rates, reminder notices to respondents who have yet to complete the survey will be made via email and telephone.

Measures

As noted above, the purpose of the survey is to ascertain how useful and effective the Stage Gate Level 3 Oversight process is to agency personnel in ensuring successful IT projects. To ascertain agency personnel understanding and satisfaction as well as the effectiveness of the process, twelve different variables will be used as part of the survey. The table below sets forth those variables of interest for this survey. The survey questionnaire is attached after the table.

Theme	Variable	Conceptual Definition	Level of Measurement	Question number
U n d e r s t a n d i n g	Experience with Project Management	Respondent's experience level with project management	Categorical - Ordinal	2
	Experience with PMBOK	Respondent's experience level with using Project Management Body of Knowledge (PMBOK) Approach to project management	Categorical - Ordinal	3
	Complexity	Respondent's view of the level of complexity of the Stage Gate process	Categorical - Ordinal	7
	Training	The level of training Respondent received on the Stage Gate process	Categorical - Ordinal	6
	Experience with IT projects	Respondent's experience level with IT projects	Categorical - Ordinal	4
S a t i s f a c t i o n	Time Spent on Process	The amount of time Respondent spent meeting the requirements of the Stage Gate process.	Categorical - Ordinal	8
	Usefulness of Time Spent	Respondent's view of the time commitment of Stage Gate Level 3 Process.	Categorical - Ordinal	9
	Satisfaction	Respondent's level of satisfaction with the Stage Gate process.	Categorical - Ordinal	11 & 13
E f f e c t i v e	Use of Documents and Artifacts	The level of use by Respondent of the documents and artifacts created by them (e.g., project management plan) as part of the Stage Gate process	Categorical - Ordinal	10

v e n e s s	Effectiveness	The Respondent's view of the effectiveness of the Stage Gate process in achieving successful IT projects	Categorical - Ordinal	13
D e m o g r a p h i c s	Role on Project	Was respondent either the Business Contact or Project Manager or another role	Categorical - Nominal	1
	Number of Projects with Stage Gate Level 3 Oversight	Number of projects with Stage Gate Level 3 Oversight in which the agency personnel were involved	Categorical - Ordinal	11

SURVEY QUESTIONNAIRE

As you may be aware, the Stage Gate process was created to prevent Oregon state agencies from experiencing catastrophic information technology (“IT”) project failures. The OSCIO is conducting a survey of agency personnel who have participated in the Stage Gate process for complex, high-risk IT projects, known as the Stage Gate Level 3 Oversight process. The purpose of this survey is to help OSCIO analyze how beneficial and effective the Stage Gate process is for agency personnel undertaking complex, high-risk IT projects. You are invited to participate in this survey based on your role either as the project manager or as the business contact on an IT project that was subject to Stage Gate Level 3 Oversight. Your responses will be kept confidential and used solely for research purposes. This survey should take between 5 to 10 minutes to complete. Please respond to the following:

- 1) What was your role on the information technology (IT) project subject to Stage Gate Level 3 oversight?
 - i) Business Contact
 - ii) Project Manager
- 2) How much project management experience do you have?
 - i) Significant Experience
 - ii) Moderate Experience
 - iii) Low Experience
 - iv) No Experience
- 3) How much experience do you have with the Project Management Body of Knowledge (PMBOK) approach to project management?
 - i) Significant Experience
 - ii) Moderate Experience
 - iii) Low Experience
 - iv) No Experience
- 4) How many years of experience do you have working on IT projects?
 - i) 0 – 3 years of experience
 - ii) 4 – 6 years of experience
 - iii) 7 – 9 years of experience
 - iv) 10 or more years of experience
- 5) How many IT projects have you actively participated in that were subject to with Stage Gate Level 3 Oversight?
 - i) One IT project
 - ii) Two or Three IT projects
 - iii) Three or Four IT projects
 - iv) Five or more IT projects
- 6) What training on the Stage Gate process did you receive?
 - i) One day or more of training
 - ii) Between 3 – 6 hours of training
 - iii) Between 1 – 3 hours of training

- iv) Less than 1 hour of training
 - v) No training
- 7) How complex did you find the Stage Gate Level 3 Oversight process?
- i) High Complexity
 - ii) Moderate Complexity
 - iii) Low Complexity
- 8) How much of your time working on the IT project subject to Stage Gate Level 3 Oversight was spent meeting the Stage Gate Level 3 Oversight requirements?
- i) 25% or less of my time
 - ii) 50% or less of my time
 - iii) 75% or less of my time
 - iv) More than 75% of my time
- 9) Do you agree that the time you spent on meeting the requirements of the Stage Gate Level 3 Oversight process was time well spent?
- i) Strongly Agree
 - ii) Somewhat Agree
 - iii) Somewhat Disagree
 - iv) Strongly Disagree
- 10) How often did you refer to and use the documents and artifacts created as part of the Stage Gate Level 3 Oversight process?
- i) Very Frequently
 - ii) Somewhat Frequently
 - iii) Somewhat Infrequently
 - iv) Very Infrequently
- 11) How satisfied are you with the Stage Gate Level 3 process?
- i) Very Satisfied
 - ii) Somewhat Satisfied
 - iii) Somewhat Unsatisfied
 - iv) Very Unsatisfied
- 12) Do you agree that the Stage Gate Level 3 process was effective in ensuring the IT project was successful?
- i) Strongly Agree
 - ii) Somewhat Agree
 - iii) Somewhat Disagree
 - iv) Strongly Disagree
- 13) Would you recommend the Stage Gate Level 3 process to other agencies?
- i) Strongly Recommend
 - ii) Recommend
 - iii) Not Recommend
 - iv) Strongly Not Recommend

References

GoLocalPDX News Team. (2014, October 28). Cover Oregon Not First Multi-Million Dollar Tech Disaster on Kitzhaber's Watch. Portland, Oregon. Retrieved October 2019, from <http://www.golocalpdx.com/news/cover-oregon-not-kitzhabers-first>

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Remler, D., & Van Ryzin, G. G. (2015). *Research Methods in Practice: Strategies for Description and Causation*. (Second, Ed.) Thousand Oaks, CA: Sage Publications, Inc.