



# TECHNOLOGY INVESTMENT

## NOTIFICATION PROCESS

*FY18*

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## TECHNOLOGY INVESTMENT

Information technology (IT) investment is used throughout the State of Nevada to support and facilitate ongoing and future program activities. IT investment is used to improve services to Nevada's constituents as well as to initiate program and service delivery innovation. Many federal and state directives also require completion of one or more IT related elements and/or projects. Technology investment represents an important – and often significant – expenditure to the State.

The processes and procedures introduced below are intended to improve overall IT investment visibility and collaboration, identify additional statewide investment opportunity, better monitor and administrate the collective IT investment spend for the State, and provide an important step for further strategic technology investment planning statewide.

## TECHNOLOGY INVESTMENT REQUEST (TIR) METHODOLOGY UPGRADE

The new processes and procedures described below replace and/or refresh the former Technology Investment Request (TIR) methodology used in prior years. The previous methodology and TIR approach is upgraded and changed to better reflect how technology opportunity is now identified, evaluated and implemented throughout the state.

Rather than a single monolithic “one size” fits all TIR approach, information technology investments will now be reported and assessed based on the type and scope of the investment. The procedures and processes presented below are intended to reduce former TIR process ambiguity and provide a more structured and consistent approach for IT investment notification and assessment.

## PROCESS HIGHLIGHT

A new notification process kick-starts the upgraded reporting process. When it is determined that a technology investment/expenditure is to occur – new or existing – a Technology Investment Notification (TIN) is submitted. The TIN, a questionnaire based product, captures overall IT investment scope and purpose and may reduce or eliminate the need for additional detailed TIR information in some instances.

## LOOKING AHEAD

The upgraded TIR process streamlines agency IT investment notification and subsequent assessment. It provides improved strategic information. We hope you find the new process helpful and responsive.

CIO, State of Nevada  
March 1, 2018

## Introduction

Information Technology (IT) plays an important role within the State. Most agency programs and operations rely heavily on IT systems and applications to process data and report information to stakeholders and constituents. Centralized notification and monitoring of IT investment throughout the State helps determine IT trends and opportunities and provides visibility into the State's total IT investment spend. A centralized IT notification and request approach improves collaboration between State entities and helps identify potential technology investment synergies.

IT investment includes computing hardware and software products as well as consulting, maintenance, and implementation services. Other IT investment includes infrastructure products and services such as server hosting, network transport, and communications services. These IT products and services, and their resulting technology and business solutions, range significantly in scope, size and purpose. To better identify current and future technology uses and trends and to better plan technology funding and appropriate budget preparation, agency technology planners and decision makers will use the technology investment notification and request procedures outlined below.

Per state statute (refer to Appendix A, Statutory Authority) the Enterprise Information Technology Services Division of the Department of Administration is designated as the resource for collecting and administering a centralized approach for notifying and reporting IT investment. The Division is responsible for promoting economical use of information technology throughout state government, and more specifically, the Division Administrator is to review and sanction IT investments of \$50,000 or greater. The procedures and steps outlined below are designed to accomplish this directive.

### PROCESS OVERVIEW

The high-level steps for reporting IT investments of \$50,000 or greater for assessment and approval include the following:

#### Agency Steps

1. Technology Investment Notification (TIN) Submission – for each \$50,000 or more technology investment to be made (regardless of the technology investment purpose, scope and timing) a questionnaire based notification is completed and

submitted. Submitted TIN information is reviewed and compared with other technology investments throughout the state, and is weighted against current state technology trends and strategies. Information submitted via the TIN may be sufficient for most technology investment evaluation and authorization purposes.

2. Technology Investment Request (TIR) Submission – when necessary, more detailed IT investment request information may be required. Supplemental information collected via the TIR is intended to provide a more detailed view of the planned or requested investment. Collected TIR data is used to communicate implementation approach and management plan details, and solution alternatives considered. Other details that may be required in the TIR include project scheduling, overall investment costing and funding, benefit analysis, detailed security and related project risk, and other evaluation criteria. A TIR is typically associated with technology investments that require a larger or more complex implementation process, and/or the investment has a larger consultant or vendor participation element. Planned technology investments that are part of an agency's biennial budget preparation and definition process may require added TIR data.

### Technology Investment Administrator Steps

3. When a TIN and any related TIR information is received it is reviewed by the Technology Investment Administrator as well as other assigned technology subject matter experts as needed. A general review of the proposed investment scope and implementation approach are completed as well as an evaluation of possible impact to the State's overall IT investment and environment. Notifications and requests are reviewed and compared against other prior investment notifications. The overall investment impact and its potential collaboration and synergistic opportunities with other state technology initiatives are considered. If necessary, additional information may be requested during the review and assessment process. Once the review is complete a notice of investment review completion is provided to the submitting agency.
4. Each TIN is uniquely identified for tracking and monitoring purposes. When completed, a notice of the division administrator's review is provided to State

Purchasing and the Budget Office for investment procurement matching and for funding validation.

5. All submitted technology investment notifications and requests are made available for review by the IT Strategic Planning Committee (ITSPC). Approved requests that are \$500,000 or larger in size, regardless of when submitted, are presented to the ITSPC for further consideration and prioritization. ITSPC members receive notice of all technology investments that are \$500k or greater for review and ranking of each investment.
6. A repository of current and prior notifications and requests is maintained for historical and ongoing research and reference purposes.

The above steps are further defined and described below.

## Roles and Responsibilities

### TECHNOLOGY INVESTMENT ADMINISTRATOR

To help facilitate and coordinate the reporting and assessment of technology investments throughout the state, a Technology Investment Administrator from the Enterprise Information Technology Services Division of the Department of Administration is assigned to govern and administrate the process. The Technology Investment Administrator is a key resource to agencies for reviewing and discussing the steps and processes for completing technology investment notifications and requests. The administrator tracks, monitors, and communicates request status and eventual request results for all submitted investments. In addition to administering the process, the administrator is also available to help agencies with suggestions and ideas on how to prepare and complete technology investment notification and request information.

### AGENCY RESPONSIBILITY

While the Enterprise Information Technology Services Division (EITS) is responsible for receiving and tracking state-wide technology investment notifications and requests, a submitting agency is ultimately responsible and accountable for ensuring efficient, cost effective, and successful implementation of their technology investments.

From information provided by the submitting agency, the Technology Investment Administrator and other assigned EITS subject matter resources will generally assess an investment's viability, synergistic opportunity, and technology best-fit to current and future State technology trends and strategies. The division's authorization of an investment notification or request is not a blanket indication or statement of potential investment implementation success or that stated agency investment costs are fully vetted, appropriate, or final. Nor is the authorization a final or definitive indication that proper or complete project planning, implementation scoping, and work scheduling has occurred, or that an agency has appropriately identified all investment related requirements and has defined and documented them appropriately, rather; the authorization is a process statement that the investment as reported has been reviewed, assessed and compared to similar requests and that the stated scope and cost is in line with overall State technology direction and other best practices.



### Agency Investment Implementation

Submitting agencies must ensure that the scope, approach and usage of each technology investment achieves planned objectives. Successful technology deployment and related consulting services usage require much more project planning, oversight and day-to-day management than what is typically available or communicated in a technology investment notice or request. Agencies are ultimately responsible for completing appropriate technology evaluation, funding, staffing, and project management when and where needed to achieve successful technology implementation.

### Agency BOE Contracts

Agencies preparing technology investment contracts to be submitted to the Board of Examiners (BOE) should contact the Technology Investment Administrator regarding investment notification and request procedures. New contracts containing technology investment require completion of the documentation identified in this process before presentation to the BOE.

### BIENNIAL BUDGET PLANNING

Technology investment planning for the biennial budget process should begin a year in advance of budget submission. The Technology Investment Administrator is available to assist in planning discussions. Notification and requests for biennial-budgeted technology investments are typically due to the Technology Investment Administrator in April of even numbered years (specific dates are provided in the Governor's Finance Office *Budget Instructions* document). Biennial-budgeted technology investment requests submitted after the deadline specified in the *Budget Instructions* are past due and require additional approval for late submission from the Technology Investment Administrator.

### NON-BIENNIAL, INTERIM AND GRANT FUNDED TECHNOLOGY INVESTMENTS

Regardless of timing or funding within the biennial budget process or otherwise an agency must notify the Technology Investment Administrator of all planned technology investments \$50,000 or greater using the Technology Investment Notification (TIN) process described in this document.

## IFC Work Programs

For technology investments that are part of a Work Program process to the Interim Finance Committee (IFC), the notification and pertinent request information is to be provided to the Technology Investment Administrator at least four (4) weeks in advance of the Budget Office's deadline for IFC submissions. Submissions after this period require additional coordination between the Budget Office and the Technology Investment Administrator and may be rejected for IFC processing.

## Grant Funded Investments

Grant funded technology investments often occur outside of the biennial budget cycle. Regardless of timing, a Technology Investment Notification is required for all grant funded technology investments. The Technology Investment Administrator is available to provide guidance to help agencies minimize redundant effort or rework for grant funded technology requests.

## BIENNIAL BUDGET CYCLES

It is understood that technology investments and related implementation timeframes do not necessarily coincide with the State's biennial budget cycle. Some investments, especially larger investments, will transcend one or more biennial budget periods. As additional funding is sought, it is important for decision makers to understand the status and importance of proceeding with a technology investment in light of other investments, new or ongoing, which compete for limited funding; therefore, agencies requesting or requiring funding for an ongoing investment must submit an updated Technology Investment Notification (TIN) for each biennial budget cycle. The submission should include current investment status information.

## STRATEGIC PLANNING COMMITTEE

All approved technology investment notifications and requests are made available for review by the IT Strategic Planning Committee (ITSPC). Technology investment notifications and requests that are \$500,000 or more - regardless of the current biennial budget cycle - are presented to the ITSPC for review and ranking. The ITSPC is an advisory committee to the Governor and helps identify and resolve strategic information technology issues facing the State. The committee facilitates, develops and decides on strategy to address technology issues, and provides guidance in making decisions. The

ITSPC helps prioritize large IT investments and provides additional enterprise IT planning for the Executive branch. A copy of the full ITSPC charter is available upon request from the Investment Technology Administrator.

## **Technology Investment Prioritization**

Technology investments of \$500,000 or greater are reviewed and ranked by the ITSPC. Investments are generally prioritized based on the following considerations:

- How well does the investment benefit the state including constituents and other agencies;
- Are there significant customer/constituent service improvements;
- How large of a customer base is impacted by the investment;
- Does the investment reduce state costs and improve state revenues;
- Is the investment required to satisfy federal or state mandates and directives;
- What type of risks are associated with the investment;
- Does the investment align with the Governor's goals and objectives; and,
- Other similar criteria.

Using automated collaboration tools, the Technology Investment Administrator provides a current listing of investment items \$500k or larger to each ITSPC member. Each member reviews the investment requests and provides their individual preliminary ranking results. On a quarterly or other periodic basis the ITSPC collaborate and collectively prioritize investment requests. The prioritized investments are provided to state, budget and other executive personnel for planning purposes. The review and ranking process is facilitated by the Technology Investment Administrator.

## **SUBJECT MATTER EXPERTS**

Technology investments and ensuing solutions include a wide range of products, infrastructures, services, plans, schedules, financial approaches and other technical and fiscal criteria. As needed, the Technology Investment Administrator assigns portions of a technology investment assessment to specific subject matter experts (SMEs) who then assist with the evaluation. Drawing on their particular professional background, knowledge and specialty, assigned SMEs review and assess pertinent portions of a technology investment and provide appropriate feedback. The Technology Investment Administrator schedules and coordinates SME participation.

## Investment Assessment

Once submitted, each technology investment notification and any related request information undergoes an assessment to determine if the investment aligns with State program objectives as well as current and future technology trends and direction. The following technology investment assessment guidelines are used:

- **Investment Purpose** – the overall purpose of an investment should align with the governor’s stated business and technology objectives and goals. The technology investment should further align with current and planned state-wide technology initiatives and stated direction as outlined by the State CIO.
- **Program Benefit, Impact and Feasibility** – a technology investment should provide value and benefit to Nevada’s constituents as well as to state and agency program initiatives. The investment should be economically feasible, cost effective, provide a return on investment, and align with business program objectives whenever possible.
- **Funding Sources and Availability** – funding sources should be specifically identified and confirmed available. Funding should cover the initial implementation effort and the ongoing investment life cycle for a period of approximately five (5) years.
- **Investment Scope and Size** – the investment scope and size should be well identified and understood and the planned implementation approach, schedule and time frame matched to the investment purpose. To help ensure a better understanding of the investment scope and size, a detailed requirement-definition should be completed when specific business functions are to be automated.
- **Technology Infrastructure Impact** – each technology investment should consider and indicate what if any impact to existing or new technology infrastructure is required or expected as a result of the new investment. In particular server hosting arrangements and approach and the impact to network and communication lines should be considered and identified.
- **Security Risk** – sensitive program information and personal identification data should be safeguarded with any technology investment, and a security approach and direction should be part of the implementation.

- Project Management Approach – depending on the size and scope of the technology investment a well thought out project management approach and project schedule should be considered as part of the implementation effort.
- Consulting services – if consulting services are to be used the expected services and associated timeline and expected outcomes along with the overall consulting approach should be well understood.
- Custom Development – if the technology investment requires custom development as part of the solution a well understood set of solution requirements should be identified and used to structure the implementation.
- Investment Implementation – if the investment is to include end-user acceptance; end-user training; data conversion; system interfacing, disaster recovery and other similar elements the approach, scope and ownership of each task should be well established and defined.

### **Investment Assessment Summary**

An impact and risk attribute and evaluation methodology are used by the Technology Investment Administrator and subject matter experts to assess notifications and related requests. At the completion of an assessment, the Technology Investment Administrator notifies the submitting agency regarding outcome and provides follow-up steps if necessary.

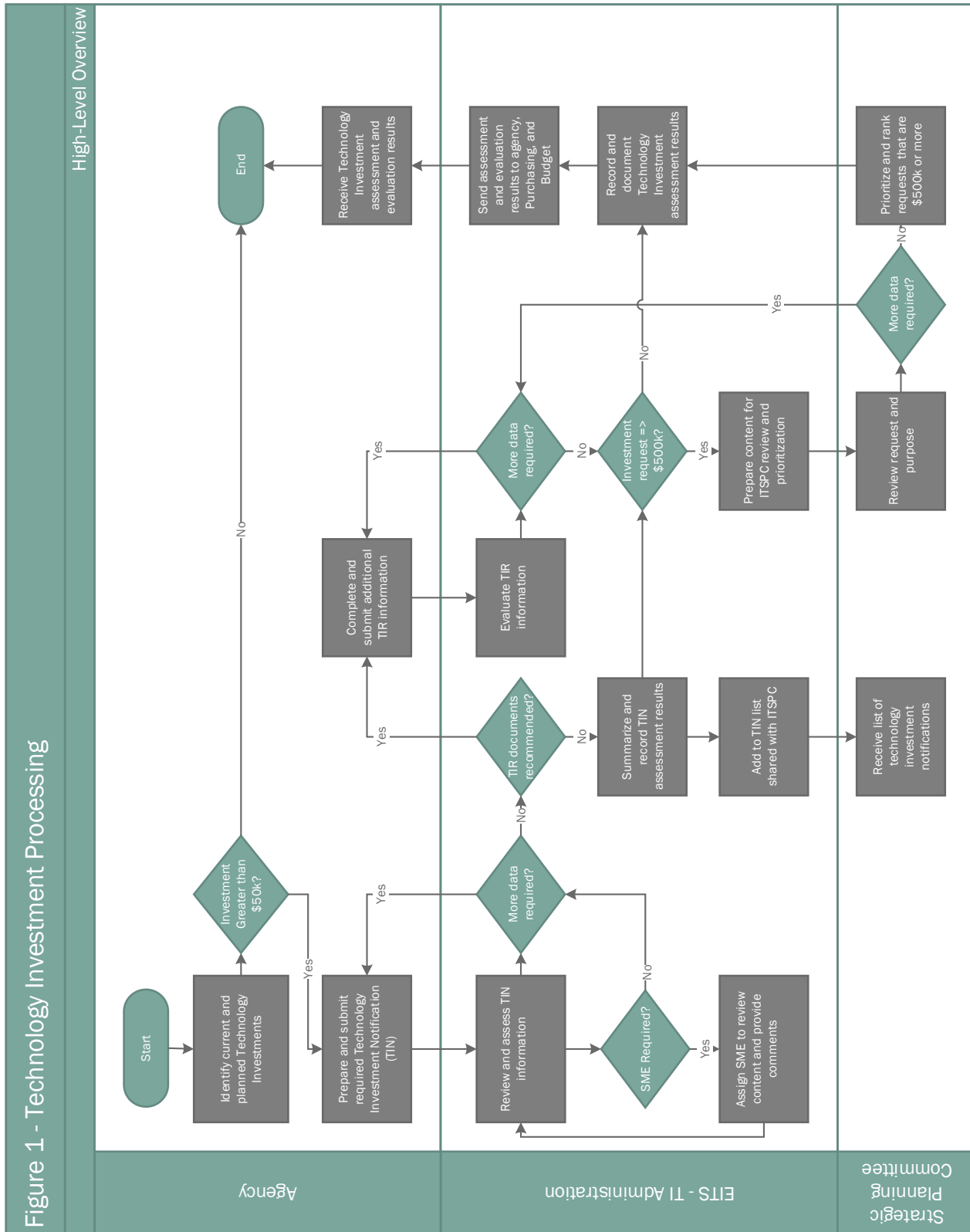
## Technology Investment Process Instructions

All technology investments of \$50,000 or more require communication to the Enterprise Information Technology Services Division (EITS) Administrator/State CIO via the notification and request procedures and processes outlined in this document. Regardless of the proposed technology investment purpose, scope, or biennial timing, each agency planning or completing a technology investment of \$50,000 or more must submit a Technology Investment Notification (TIN) for each anticipated investment and/or technology initiative. Information captured in the notification is used to assess the investment as outlined in the *Investment Assessment Section* above. If warranted, due to the technology investment size and scope or when recommended as part of the completed TIN assessment, an agency may be required to provide supplemental investment planning and feasibility information by completing detailed Technology Investment Request (TIR) information. The Technology Investment Administrator determines when additional detailed investment information is required.

### PROCESS FLOW

The following process flow, *Figure 1 - Technology Investment Processing*, provides a high-level visual representation of how the technology investment notification and request processes are used.

# TECHNOLOGY INVESTMENT NOTIFICATION PROCESS



## TECHNOLOGY INVESTMENT NOTIFICATION (TIN)

A Technology Investment Notification (TIN) must be submitted to the Enterprise Information Technology Services Division (EITS) Administrator/State CIO for all technology investments of \$50,000 or greater. Regardless of the proposed technology investment purpose, scope, or biennial timing, each agency planning or completing a technology investment of \$50,000 or more must submit a TIN. A copy of the TIN and detailed submission instructions are found in *Appendix B, Technology Investment Notification - Completion and Submission Instructions*.

For initial or first time technology investments, an agency will submit a TIN each year that the technology is being implemented until the investment is fully implemented and in a go-forward maintenance mode. Subsequent additions, enhancements, upgrades, and ongoing maintenance to an existing investment that are \$50k or greater also require a TIN.

### Notification Format

The TIN is a questionnaire/survey based format that is completed and submitted by the requesting agency. It contains information about the expected purpose, size and scope of the intended technology investment. Prior to initiating and submitting a TIN, it is recommended that an agency review each question and collect necessary content required to complete their response. Incomplete submissions are returned for additional information and completion.

It is anticipated that a notification can be completed and submitted in a relatively short period of time if a submitting agency follows the survey format and instructions and has previously considered pertinent response information beforehand. The TIN provides an “order of magnitude”, consistent, structured, and codified approach for submitting investment requests. A clear statement about the intended

### AGENCY STEP

*Completing and submitting the Technology Investment Notification (TIN) questionnaire is the primary step required by the agency.*

### CONTINUOUS IMPROVEMENT

*The TIN is expected to undergo continuous improvement. Suggestions are welcomed and encouraged.*



investment purpose, expected costs, and management approach are key objectives of the TIN.

The TIN survey/questionnaire includes the following topics:

- Submitting Agency Information
- Investment Title and Description
- Expected Investment Amounts and Funding Sources
- Primary Budget Account and Decision Unit (when appropriate)
- Investment Purpose and Program Impact
- Anticipated Risk
- Project Management Approach
- Infrastructure Impact (if relevant)
- Business Application Information (if relevant)
- Custom Software Development Scope (if relevant)
- End-User Training Approach (if relevant)
- End-User Acceptance Testing Approach (if relevant)
- Systems Interfacing Scope (if relevant)
- Data Conversion Approach (if relevant)
- Disaster Recovery Approach (if relevant)
- Desktop, Printer, Phone Investment (if relevant)
- Detailed Cost Items and Estimated Amounts
- And other related and descriptive investment information

For each of the above topics specific agency responses are captured and submitted.

## **Investment Assessment Outcomes**

A general assessment of the technology investment is then directed and completed by the Technology Investment Administrator. If relevant, specific technology and fiscal subject matter experts (SMEs) are requested by the administrator to review applicable portions of the response. Once the review and assessment is complete the Technology Investment Administrator notifies the submitting agency regarding outcome and provides follow-up steps if necessary.

Outcomes of the TIN assessment include:

- Clarification – insufficient information is provided in the TIN and the submitting agency is requested to add more content and descriptive information about the investment to facilitate the assessment.
- Non-Authorization - the TIN assessment is complete and results in non-authorization by the State CIO until certain modifications or investment clarifications are made by the submitting agency.
- TIR Recommended - the assessment is complete however the Technology Investment Administrator recommends that the submitting agency prepare supporting Technology Investment Request (TIR) information. The TIR information is used to more fully determine investment feasibility and anticipated costs; better define investment scope and size; improve the implementation approach; consider more in-depth potential security issues, investment risks, and infrastructure impact; and/or, other relevant content given the intended purpose of the investment.
- Approved - the assessment is complete and the result is investment recognition and approval by the State CIO.

### TIR INFORMATION

*If necessary the Administrator may request that additional TIR information be completed.*

### Assessment Impact

A structured approach is used to complete the TIN assessment. The Technology Investment Administrator uses an impact and risk attribute assessment methodology to assign value to different assessment topics. In addition to using the assessment guidelines mentioned above, a TIN submission is evaluated on the following:

- General content and completeness of the information submitted;
- Investment alignment with the governor's stated program and business objectives;
- Investment alignment with current and planned State technology trends and direction;
- Collaborative and synergistic opportunities with other entities;
- Improved benefit and value to the State and its constituents;
- Risk minimization and management;

- Sufficient planned security and protection of sensitive data;
- Adequate project management and project oversight when and where needed;
- Sufficient control over consultants and expected services if relevant;
- A well-defined definition of investment requirements for business applications and custom solutions if relevant;
- A comprehensive understanding of the scope, size, and task ownership of the intended investment from a systems life cycle perspective;
- Understanding and control of expected implementation components;
- Sufficient consideration and management of expected investment impact and outcomes; and,
- Other pertinent criteria.

### RATING SCALE

A rating scale, such as from one (1) to five (5), is used to assign value to assessment topics.

### Technology Investment Submission

A TIN is submitted to the Technology Investment Administrator by completing the online form located in the Technology Investment Submission site found at this address:

<http://nvsp.nv.gov/tin/sub/>. To access the form a person must have an appropriate state account and be added to the submission site. To request access please contact the Technology Investment Administrator at TIAdmin@admin.nv.gov.

A copy of the TIN questionnaire/form and detailed submission instructions are found on the site at:

<http://nvsp.nv.gov/tin/sub/>

### Technology Investment Request (TIR)

Supplemental Technology Investment Request (TIR) information is submitted to the Technology Investment Administrator when additional detailed information is warranted or requested to fully describe, justify, or plan a proposed technology investment. TIR information is used

### AGENCY STEP

*Completing and submitting additional Technology Investment Request (TIR) information may be required if the size, complexity, or other planning circumstances necessitate.*

for larger more complex investments and provides a more comprehensive approach for capturing more details about an investment. Collecting and preparing the additional detailed information within a TIR may be recommended and required for completion when:

- The size, scope, cost, funding, approach or complexing of a planned investment is unclear.
- The technology investment is part of the agency's larger biennial budget planning process.
- The information provided in the TIN is less definitive and the proposed solution is uncertain.
- The technology investment includes a custom software development element.
- The feasibility, risk, and/or cost benefit is not well understood or is unidentified.
- The proposed technology is cutting edge with few known successful implementations.
- When multiple viable solution alternatives exist and a specified direction is vague.
- When cost information is not readily available.
- And other similar circumstances necessitate the need for additional planning detail.

### ADMINISTRATOR STEP

*The Technology Investment Administrator may assign other SMEs to participate in the assessment.*

When necessary, preparing additional TIR information helps agencies in connecting a technology investment with business goals and objectives and is useful when considering different implementation alternatives. TIR information may be warranted or required regardless of the current biennial cycle.

Irrespective of when or if the TIR process is used, an agency must submit a Technology Investment Notification (TIN) as instructed above for any investment \$50k or greater. Any additional TIR information becomes adjunct to a TIN submission.

TIR submission information may include but is not limited to one or more of the following topics:

- Business Case and Circumstances;
- Solution Alternative Evaluation and Recommendation;

- Investment Feasibility and Justification;
- Requirement Definition and Analysis;
- Federal or State Mandates;
- Benefit Analysis;
- Risk Evaluation;
- Costing Detail;
- Investment Objectives, Scope and Anticipated Results; and,
- Project Management Approach

TIR information is submitted to the Technology Investment Administrator by attaching documents to an existing TIN and submitting the documents to TIAdmin@admin.nv.gov.

A copy of the TIN questionnaire/form and detailed submission instructions are found on the site at: <http://nvsp.nv.gov/tin/sub/>

## Appendix A, Statutory Authority

Please refer to Chapter 242 – Information Services in the posted Nevada State Statutes located at: <https://www.leg.state.nv.us/NRS/>

Please refer to Chapter 242 – Information Services in the posted Nevada Administrative Code located at: <https://www.leg.state.nv.us/NAC/>

Please refer to the State of Nevada, State Administrative Manual, Section 1618, Technology Investment Request, and other references found in the manual referring to Information Technology, located at:

<http://budget.nv.gov/uploadedFiles/budgetnvgov/content/IAudits/Forms/StateAdministrativeManual.pdf>

### Document History

<i>REVISION</i>	<i>SOURCE</i>	<i>DATE</i>
Initial Version V01.0	EITS TIN Admin	March 1, 2018