

NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA



THESIS

19970123 040

COST BENEFIT ANALYSIS OF THE NAVAL POSTGRADUATE SCHOOL AUTOMATED TRAVEL SYSTEM

by

Keri A. Grohs
Lance R. Theby
September, 1996

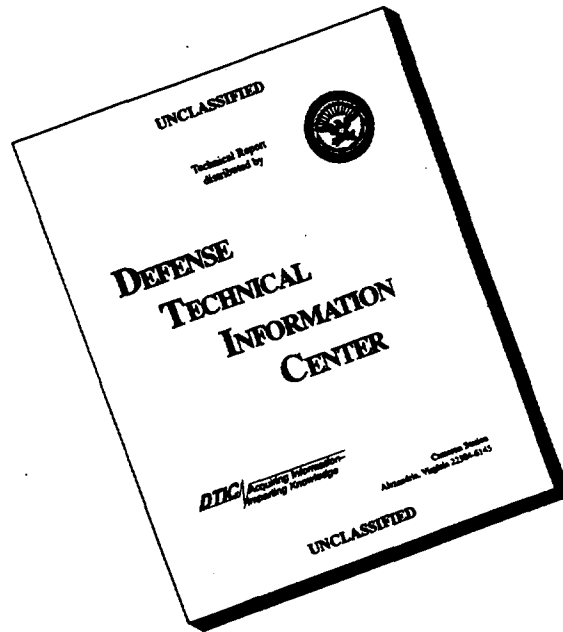
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1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE September, 1996	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE COST BENEFIT ANALYSIS OF THE NAVAL POSTGRADUATE SCHOOL AUTOMATED TRAVEL SYSTEM		5. FUNDING NUMBERS	
6. AUTHOR(S) Grohs, Keri A., Theby, Lance R.			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey CA 93943-5000		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) This thesis presents a cost benefit analysis of implementing Travel Manager Plus (TMP) basewide at the Naval Postgraduate School (NPS). Surveying all stakeholders involved in travel administration determined the baseline costs of the current system. The survey identified the steps and time required in pre-travel and post-travel processes. Using the total number of claims processed in FY95, the total cost of travel was determined. Interviews with the personnel currently testing TMP provided the same information for TMP. Combining these data determined the Net Present Value of implementing TMP during the years 1997-2000. Performance metrics and benchmarks were also identified to help NPS track performance and identify areas where improvements could be made. This thesis research found cost and time savings from implementing TMP. However, the overall net present value is modest due to high outlays for purchasing and maintaining software and administering the system.			
14. SUBJECT TERMS Cost Benefit Analysis, Travel Manager Plus		15. NUMBER OF PAGES 139	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18 298-102

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**COST BENEFIT ANALYSIS OF THE NAVAL POSTGRADUATE SCHOOL
AUTOMATED TRAVEL PROCESS SYSTEM**

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Submitted in partial fulfillment
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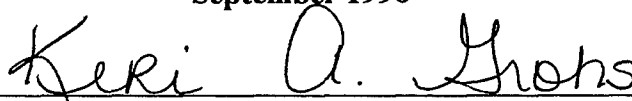
MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL

September 1996

Authors:

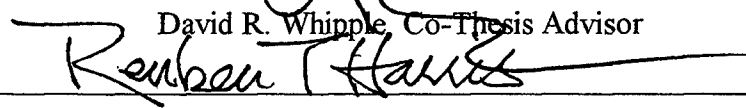

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ABSTRACT

This thesis presents a cost benefit analysis of implementing Travel Manager Plus (TMP) basewide at the Naval Postgraduate School (NPS). Surveying all stakeholders involved in travel administration determined the baseline costs of the current system. The survey identified the steps and time required in pre-travel and post-travel processes. Using the total number of claims processed in FY95, the total cost of travel was determined. Interviews with the personnel currently testing TMP provided the same information for TMP. Combining these data determined the Net Present Value of implementing TMP during the years 1997-2000. Performance metrics and benchmarks were also identified to help NPS track performance and identify areas where improvements could be made.

This thesis research found cost and time savings from implementing TMP. However, the overall net present value is modest due to high outlays for purchasing and maintaining software and administering the system.

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I. INTRODUCTION

Within the past few years, there has been an increasing emphasis on improving the Department of Defense's (DOD) travel administration process. The Defense Performance Review (DPR), as a part of the National Performance Review (Gore, 1993), identified the DOD travel system as a prime candidate for reinvention. As the DOD officially became part of the reinvention effort, initiatives began at many different levels within the DOD. One such effort involved implementing Travel Manager Plus (TMP) as a pilot project at the Naval Postgraduate School (NPS) beginning in February of 1995. Performing a Cost Benefit Analysis (CBA) comparing the existing manual travel process and the pilot implementation of TMP is a logical step in the reinvention process. Ultimately, we want to know if there are identifiable costs savings from TMP as it has been implemented in the pilot project.

A. COST BENEFIT ANALYSIS

1. Overview

Integrating Cost Benefit Analysis (CBA) in any significant decision process has become a standard in the (DOD). Circular No.A-94, otherwise known as "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," mandates that a CBA must be performed to "promote efficient resource allocation through well informed decision making." DOD Instruction 7041.43 (Economic Analysis for Decision Making) states:

Economic analysis is a systematic approach to the problem of choosing the best method of allocating scarce resources to achieve a given objective. A sound economic analysis recognizes that there are alternative ways to meet a given objective and that each alternative requires certain resources and produces certain results...Each feasible alternative for meeting an objective must be considered, and its life-cycle costs and benefits evaluated.

The CBA will provide all interested parties with information concerning whether it is economically feasible to implement TMP throughout NPS.

2. Analysis

The primary methods to identify administration costs in the NPS travel process(Manual or TMP) were personal interviews and a survey (Appendix A). Because of the diverse techniques used, it was necessary to physically identify all personnel actually involved in the NPS travel administration process. This required a pre-survey to gather information on the primary stakeholders. With the exception of the Comptroller, Personal Support Detachment (PSD) personnel and individual travelers, all other stakeholders are identified either as Departmental Travel Representatives (DTR) or Departmental Claims Representative (DCR). The distinction between the DTR and the DCR is extremely subtle and in most cases the same person performs both functions. Therefore, we only use the acronym DTR. Since the duties of the DTR vary widely from department to department, the term "DTR" only refers to the general responsibility of handling travel arrangements within the department. A total of 36 DTR's were identified.

The interviewer typically explained the research objective and the individual survey form elements to the DTR. Depending upon the circumstances, the form was either immediately completed in the presence and with the assistance of the interviewer, or it was left with the DTR and an appointment was made to retrieve the completed form and answer questions.

3. Assumptions

An effective CBA should be explicit about the underlying assumptions used to arrive at estimated benefits and costs. This analysis should state the assumptions, the rationale behind them, and review their strengths and weaknesses. Key data and results, such as year by year estimates of benefits and costs, should be reported to promote independent analysis and review. (OMB, 1994) The following assumptions apply:

- Analysis begins with traveler's request and ends with claim settlement. Even though significant storage and handling cost are incurred after the claim has been settled these are not considered in this CBA. (Tharpe, 1995)
- Only Temporary Assigned Duty (TAD) travel will be measured.
- Both student and staff travel are to be considered.
- The period of measurement will be Fiscal Year (FY) 95. This period was the most recent complete fiscal year of travel available. Furthermore, we made the assumption that the amount of travel vouchers, when completed in FY 96, will approximate the number completed in FY 95. This number will be held constant for comparative analysis reasons throughout this thesis.
- All wage calculations were based on calendar year (CY) 1996 figures.

- Times provided will be estimated by personnel performing tasks.
- Process times will reflect CONUS travel only.

4. Evaluation of Alternatives

This CBA will evaluate alternatives within both systems. This means that we will look at each process in its pure form, and hybrid combinations as suggested by the analysis.

B. The NPS ENVIRONMENT

NPS has more than 2000 students and staff assigned. Comptroller figures reveal that in FY 95 there were 6844 trips taken by these two groups. (Comptroller, 1996)

C. TRAVEL MANAGER PLUS (TMP)

1. History of TMP at NPS

TMP is a software based process designed to simplify travel document processing and procedures, primarily by providing the capability to process travel documents electronically. All travel administration documents, including travel authorizations, travel vouchers and local vouchers, can be created and modified within TMP. Customized reports reflecting the status of these documents can be produced. Real time per diem rates, system generated travel authorizations and travel vouchers are available on-line. A scaled down version of TMP was purchased by the Financial section within the Comptroller's office in October of 1994. This was followed by a partial software implementation within NPS over the

next year. In March 1995, the travel reengineering team was formed. It included representatives from a variety of functional departments involved in the travel process. In February 1995, a Thesis presentation (Tharpe,Tate, 1995) was the catalyst for implementing TMP at NPS in conjunction with the reinvention process. In July 1995, TMP DOD version was installed. It was implemented in the test departments in October 1995. Subsequently, NPS was chosen to be a DOD pilot site for travel process reinvention for DOD

2. Size and Scope

TMP is currently used at three NPS test sites: Mechanical Engineering, Systems Management, and Electrical and Computer Engineering. In addition, TMP is used by the Comptroller's office and Personnel Support Detachment to complete their functions in the travel process. The Comptrollers office has assigned a GS-12 to serve as the TMP system administrator and training coordinator. In this capacity, the position is also responsible for overseeing all hardware and software updates directly associated with TMP.

D. ORGANIZATION OF THESIS

This thesis is organized as follows:

Chapter I: Introduction

Chapter II: Performance metrics

Chapter III: Baseline cost of current system (Manual system)

Chapter IV: Baseline cost of pilot project (Travel Manager Plus)

Chapter V: TMP baseline V.S. NPS baseline analysis

Chapter VI: Benchmarks

Chapter VII: Recommendations

Chapter I provides an historical overview of the change process at the Naval Postgraduate School and states that the primary purpose of this thesis is a cost benefit analysis. Chapter II briefly describes performance metrics and outlines techniques to determine appropriate metrics for a specific process. Furthermore, suggestions are made as to what metrics would be appropriate at NPS based on stakeholder survey inputs. Chapter III baselines the existing manual process and its associated costs by NPS Department codes. It also determines per process times and cost figures for NPS. Chapter IV baselines the Travel Manager Plus process and its associated costs and times for the three pilot locations. Chapter V compares the costs and benefits of Travel Manager Plus and the existing manual system. Chapter VI briefly describes benchmarking and identifies travel initiatives being pursued by other DOD and government agencies. This chapter identifies some existing travel industry benchmarks. This chapter will also look at possible internal benchmarking that can be done between the departments at NPS. Chapter VII provides recommendations.

II. PERFORMANCE METRICS

One of purposes of travel re-invention is to improve productivity and quality while reducing the cost of doing business. Common to all efforts to improve productivity is identifying and using measurement tools, commonly referred to as performance metrics. Performance metrics can be used to indicate areas where improvement is needed, and to gauge whether improvement efforts are making any progress. (Brinkerhoff/Dressler, 1990) Brinkerhoff and Dressler conclude that when initially establishing performance measures or metrics, the basic measurement elements must be simple and practical. Performance metrics that are not easily developed, implemented, and understood by managers, evaluators, or researchers will not be used. Therefore, they will do nothing to improve performance. (Brinkerhoff/Dressler, 1990)

A. DEFINING APPROPRIATE METRICS: A STRATEGY FOR CHANGE

1. Approach

In our endeavor to establish appropriate metrics for the NPS travel administration process, we first sought to identify an approach that would satisfy that element of our thesis goal. We sought to identify metrics that would be both useful and attainable within the time constraints of our research. Our literature review yielded a variety of determination techniques or systematic approaches applicable to our research objectives. After completion of the review, we then

limited the application of the techniques we observed to metrics that would allow ready comparison in chapter VI.

2. Methodology

When designing performance metrics, both output and input data are needed. Sink (1985) states that data can be collected from at least three different sources or in at least three general ways:

- By inquiry or soliciting input from persons in the organizational system under study.
- By observation and documenting characteristics of the organizational system.
- By collecting and utilizing existing system documentation, records, and accounts.

There are at least three unique perspectives on performance. (Sink, 1985) The first is the users' or service recipients' (traveler). The second is the service providers' (SATO, DTRs, etc.). The last is the managers' perspective (Department heads, Deans, comptroller). Each of these groups has unique ideas on how to measure performance. In evaluating the travel process at NPS, the first group includes the professors and students who travel. The second group includes the Department Travel Representatives, the clerks in the Comptroller office, and the personnel in PSD Monterey and the SATO office. The third group includes the Superintendent, Department Heads and Department Chairs.

3. Developing Measures

According to Brinkerhoff/Dressler (1990), performance measures must be useful in helping people in organizations make effective changes that result in productivity improvements. They define four central criteria that should be considered if the goal is to help organizations to produce higher quality services more productively.

- **Quality**- The measure must define and reflect quality as well as quantity.
- **Mission and Goals** - The measure must define and assess only outputs and services that are integrated with the organizational mission and strategic goals.
- **Rewards and incentives** - Measures must be integrated with performance incentives, reward systems and practices.
- **Employee involvement** - The organization's employees and other direct stakeholders must be involved in the definition and construction of productivity measures.

Globerson (1991) provides ten factors which he considers important for relevant criteria development:

- Developing performance criteria based on the organization's objectives forces managers to define them in concrete terms.
- Management is able to compare performance for similar areas as a result of established relevant performance criteria.
- Involving customers, management, and employees in the criteria selection process is key to ensuring the criteria meet organizational needs.
- Criteria must be measurable and concise in order to be valid and useful.

- Criteria must be appropriate for the organizational unit being evaluated.
- Both ratio criteria and absolute criteria are necessary when evaluating organizations.
- Although objective criteria are preferred and reliable, subjective criteria are necessary to measure service.
- The measurement must be reliable to ensure consistent and accurate results.
- Precision in selecting and using calculations is critical.
- Measurement criteria should be selected based on relevancy, not ease of use.

4. Measuring Outputs

As mentioned earlier, there are both outputs and inputs in productivity measurement. Outputs, in their simplest form, are the goods and services produced by an individual, unit, or organization. (Brinkerhoff/Dressler, 1990)

Outputs can be measured at two general levels:

- final products or services of an entire organization
- intermediate outputs in an organization

In applying that output measurement concept to the travel process, the final product is the completed travel process for the traveler. The intermediate outputs are the products produced by the different organizations involved in the travel process. For example, the output from the DTR is the original travel order; the Comptroller's output is the funding approval of the travel order.

a. Considerations for Output Measures

Brinkerhoff/Dressler (1990) list the major criteria that relate specifically to output measurement.

- **Outputs must be important and integrated with the organizational mission.** The factors that should be counted or measured need to be those that are important. Some outputs clearly count more than others.
- **Criteria on which outputs are measured must respond to "Customer" expectations.** This involves quality. Quality criteria must reflect and respond to customers' needs and expectations. Criteria for measurement should derive directly from and respond to the expectations and needs of the customer.
- **Those employees whose outputs are measured must have control over the outputs.** When productivity results are controlled by anyone outside the production unit, there is a lack of ownership for productivity improvement.

5. Measuring Inputs

Typically, an organization tends to concentrate its attention and measurement efforts on outputs.(Brinkerhoff/Dressler 1990) This reflects the popular thinking that "results" are everything; how you got there is less important. In contrast, Total Quality Leadership maintains that if you look more closely at the proces, the final result will be a higher quality, less expensive product.

Inputs are the resources consumed in producing the organization's goods and services. They are typically grouped into five major categories: Personnel, capital, energy, materials, and services (sometimes called "indirect labor" costs). (Brinkerhoff/Dressler, 1990)

Brinkerhoff identifies some guidelines to help in identifying input measures.

- **Look beyond the use of personnel costs as the input measure.** The greatest productivity gains can be achieved through a combination of capital, materials and personnel.
- **Measure first those inputs that can be directly tied to the production of final goods and services.** The most useful input measures include inputs that can be easily and clearly tied to a produced output.
- **Use available data for input measures whenever possible.** Productivity measurement does consume time and resources. Try to use available data instead of creating an elaborate system for data gathering.
- **Keep the first input measurement attempt simple.** If time and resources are not available, for fully developed input measures, begin with one simple input measure, and track that input effectively. With additional time and resources, other input measurement systems can be developed.
- **Identify inputs that provide maximum leverage.** Some inputs have a greater bearing on the quality or quantity of outputs. Concentrate on those inputs that are more critical.

B. NPS METRICS DEFINED

Sink (1985) states that when studying something as complex as productivity, it is important to utilize as many sources of information as possible. In our determination of performance metrics, this analysis solicited comments directly from all of our survey participants and from stakeholders at all levels of responsibility. We also researched other agencies in the public and private sector to determine what travel administration performance metrics were commonly in use. During the course of our research, we spoke with no less than 61 personnel directly involved

in the travel process. This included process stakeholders such as DTRs, Curricular officers, travelers, Deans, Professors, computer system administrators, and government contractors (SATO). We also reviewed publications and documentation published by the GAO and transcripts from congressional subcommittee hearings directly related to the reinvention of the DOD's travel administration process. We conducted interviews with external agencies, representatives from National Security Agency (NSA) and the Naval Weapons Center. We were able to observe in person the administration of travel as it exists in both the manual and TMP process format. Ultimately, the contents of the individual surveys and related records research was correlated and put into tabular format for review and analysis further in the chapter.

1. Qualitative Metrics

In order to make recommendations on what performance metrics may be appropriate for NPS to measure, we asked DTR's and traveler's what were important to them in terms of travel. Nine items were identified and parties were asked to annotate which ones were important to them. Figure 2-1 and Figure 2-2

illustrate their responses. The two most important things identified by both groups was timeliness and accuracy. Both groups are easily converted into quantifiable metrics and, in fact, the qualitative concept of timeliness can be easily measured and is directly related to travel voucher process times later in this thesis. In addition to these responses, Appendix G lists all survey responses concerning what could be measured and improved in the current manual travel process.

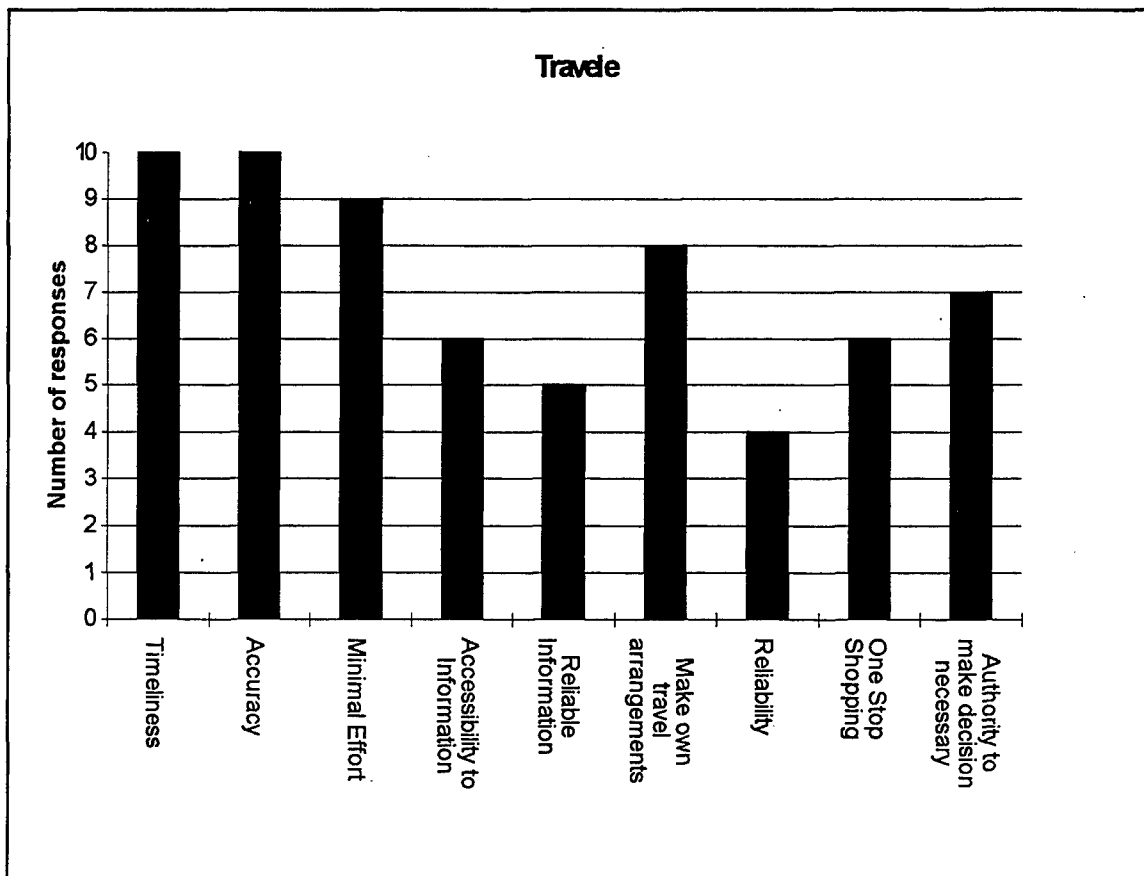


Figure 2-1. Traveler responses.

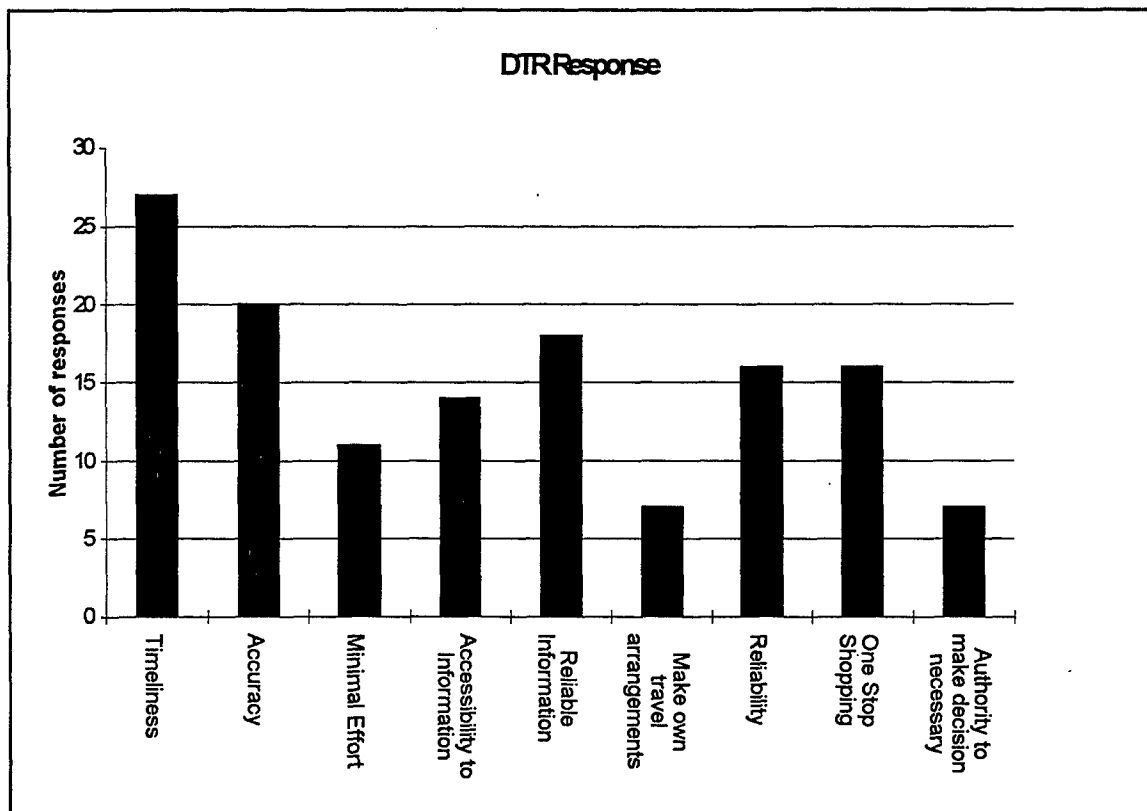


Figure 2-2. DTR responses.

2. Quantitative Metrics

As mentioned earlier, we researched other public and private agencies to ascertain what type of metrics, if any, were typical for travel administration. The four most quoted quantitative metrics observed in our research were:

- Number of steps per process
- Process time per voucher
- Administrative cost per voucher
- Administrative costs as percentage of actual travel costs

The first two metrics deal with timeliness. They effectively quantifying the actual time it takes to complete the steps in the process. The third metric measures administrative cost. The final metric is travel administration cost as a percentage of total travel budget. This figure is readily obtained using the cost per voucher, the total number of vouchers in a given time period and the total travel expenditures (actual cost of travel + the cost of travel administration) during that same period.

As mentioned earlier, our goal was to identify metrics that would allow ready comparison to other agencies. To effect ready comparison, we limited our recommendations to these four metrics. Other metrics that were identified but not selected include: Voucher turn-around time (with waiting time included) and time to receive confirmation of tickets. It is important to emphasize that we chose basic metrics as a starting point for comparative analysis (benchmarking). This concept will be covered in greater detail in chapter VI.

III. BASELINE COST OF CURRENT (MANUAL) SYSTEM

To provide a functional economic analysis of the NPS Travel System and possible alternatives, it is essential to accurately describe the existing manual travel administration process. All departments within NPS use the manual system to process travel requests, orders, and travel claims, though the degree of usage varies.

A. APPROACH

As mentioned previously, personal interviews and a survey were the primary means of identifying the costs associated with the manual system. A survey was generated using a travel process model originally developed by Tate/Thorpe (1995). The survey's intention was to solicit information about the exact steps that each stakeholder used in the travel process, how much time it took to complete each step, and the pay level of the individual performing the function. From this information, base line costs were established.

Our initial investigation found no formal list of the DTRs. Therefore, our first task involved identifying the DTR's for each Code division in the NPS structure (See Figure 3-1). Many of the departments within each code have divided the responsibilities for travel processing between two people. A common dividing point assigned one DTR to student travel and another DTR to professors in an academic department. Data inputs were received from all but one DTR.

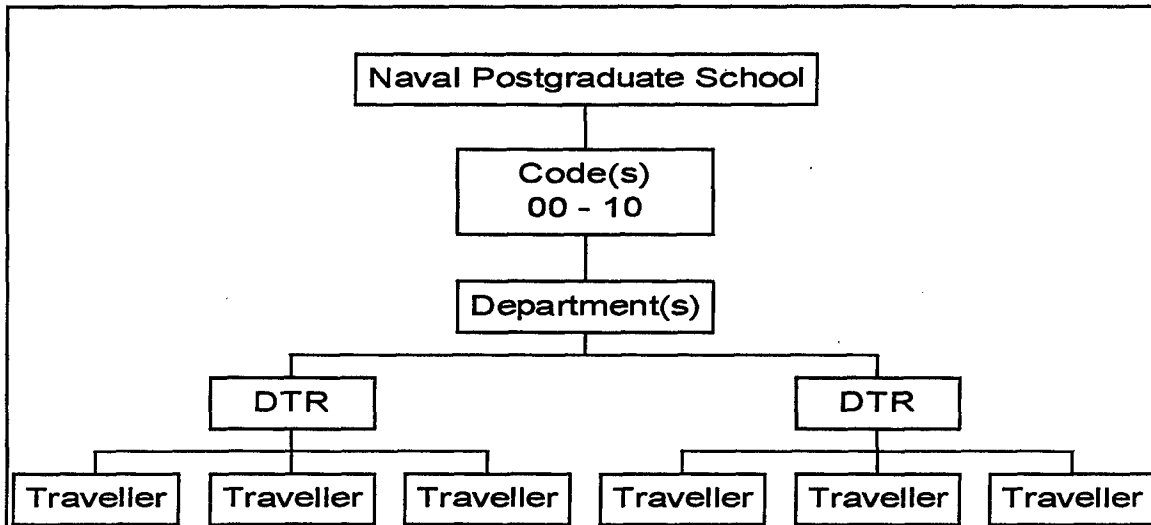


Figure 3-1. Basic Travel Administration Breakdown.

1. DTR Environmental Assumptions and Observations

Interviews with the DTR's revealed variations in the way each DTR processes travel requests. In other words, two DTRs in different codes would process the identical travel request differently. Furthermore, variations exist within each DTR's process environment such as short notice requests, improper or incorrect requests, or changes in local guidance governing request processing.

a. DTR Conflicts

94% of the DTRs indicated that processing travel requests was not their primary responsibility; travel administration is just one of the many functions they perform. It was obvious during the course of our interviews that unplanned

interruptions and local emergencies could preempt travel processing, increasing time while adding no value. The time given for each process step does not include extended waiting times, such as required when a department head is not readily available and their signature is required. The DTRs' estimated times to perform the identified task were based on conditions which the DTR felt were typical for the task. In some cases, it might take several hours to a day to obtain a required signature from a Department Head, depending on the availability of the Department Head. This waiting time is not included in the process times, but is an important consideration to the travel process as a whole.

b. "Walk through" Requests

The majority of DTRs indicated that process steps involving the Comptroller's office can take additional time if the DTRs choose to "walk through" their travel requests. This one variation can add up to 45 minutes to the process. Capturing the number of requests that were priority and therefore in need of this special attention was beyond the scope of this thesis. Therefore, we assumed that all requests were standard priority and were dropped off at the Comptroller's office.

c. Overseas Requests

When overseas travel is needed, the same process is completed as for CONUS traveler. However, there are additional steps that must also be completed. These steps include country clearance messages, and passport and visa processing. The total cost of processing overseas claims was not estimated for this thesis because these additional steps are the same for the manual system

and Travel Manager Plus. In addition, data was unavailable concerning the exact number of overseas trips processed in FY 95.

d. Cash Advances

A final assumption is that cash advances are not included in the study. Cash advances are available to travelers who do not possess a government credit card. When a traveler wants a cash advance prior to travel, there are additional steps that PSD Monterey must complete to cut a check for the traveler. Completing an advance requires a total of 12 minutes per request.(PSD,1995) This does not include time needed for travelers to pick up checks. In FY 1995, 1,196 advances were completed by PSD Monterey. (Comptroller, 1996) This represents 17% of FY95 travel processing. This adds an average cost of \$1,932 to the total cost of travel in FY95 (using the average salary of personnel performing the steps). This data is presented for information only, it is not used to compare TMP and the manual system. Advances are not done thru TMP, so we did not include this cost for comparison purposes.

e. Miscellaneous Costs

There are additional miscellaneous costs to the process such as copier costs, paper costs, other office supplies and storage costs. Capturing and analyzing these costs was beyond the scope of this thesis. Labor costs were the only costs considered in determining the cost of travel administration using the manual system.

B. PROCESS DESCRIPTION

The travel process is divided into two separate processes: Pre-travel and Post-Travel. The pre-travel process involves approving the travel and making the necessary arrangements, including airline, hotel, and car reservations, and allocating funds to pay for the travel. The post-travel process involves collecting travel documentation, verifying and validating expenditures and ultimately liquidating the travel claim. This process includes recouping any overpayment and reimbursing it to the traveler, if a payment is due.

All travel processed involves three areas within NPS. (See Figure 3-2) DTRs within the departments initiate the travel request, check to ensure that funds are available, approve the specific travel and prepare the required paperwork. The Comptroller then checks to verify that funds are being requested appropriately for their intended use and in fact are available for travel. If these requirements are satisfied, they then obligate those funds. PSD, along with the contracted commercial travel office (CTO), currently SATO, are the final stakeholders in the process. Co-located, they provide advances when requested, make the necessary reservations for travel, hotel, etc. and provide the actual tickets.

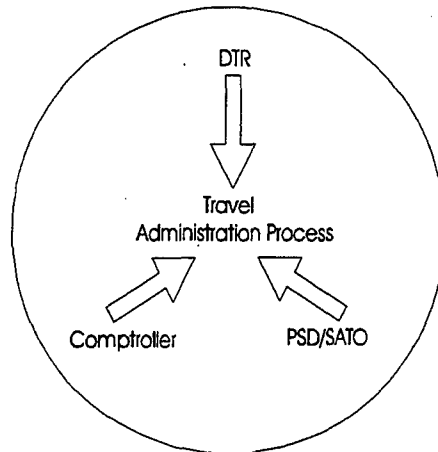


Figure 3-2. Three major areas involved in travel at NPS.

For Post-travel processing, the same three stakeholders are involved. The DTRs are responsible for initiating the travel claim and ensuring that proper documentation is attached. The Comptroller's office then matches the actual expenses to the obligated funds. Finally, the PSD is responsible for liquidating the travel claim and ensuring payments are made to the traveler or recouped from the traveler as appropriate.

C. DETERMINING BASE LINE COSTS

To capture a picture of how the travel process works school wide, and to determine an accurate cost of processing travel at NPS, the data presented follows the NPS Organizational Chart depicted in Figure 3-3. A total of 14 codes were

identified as having traveled in FY95. Code 01C was excluded from the group of 14 codes. Travel for individuals in that group was handled by Systems Management in FY95. The data from the DTR's were combined under their umbrella department code. The times given for each process step were averaged across the various DTR's under each Department code. For example, under Code 03, Dean of Students, the input from his office, the International Program office, and all inputs from the Curriculum offices were combined to create an average process time for Code 03. The traveler's involvement in the process is not included in these steps, to focus on the administrative support costs for travel. The traveler's involvement will be discussed in Chapter V.

Consolidating the data from the DTR's highlighted that there are differences in the process steps that DTR's take to complete the travel process. Some departments have consolidated tasks, others have shifted more of the administrative burden to the traveler. When determining the process steps for each of the 14 codes, any step identified by the DTRs under that code are included in the final product in Appendix B.

Under the Rate of Task Performer column, only the people who perform that step are included in the cost of that step.

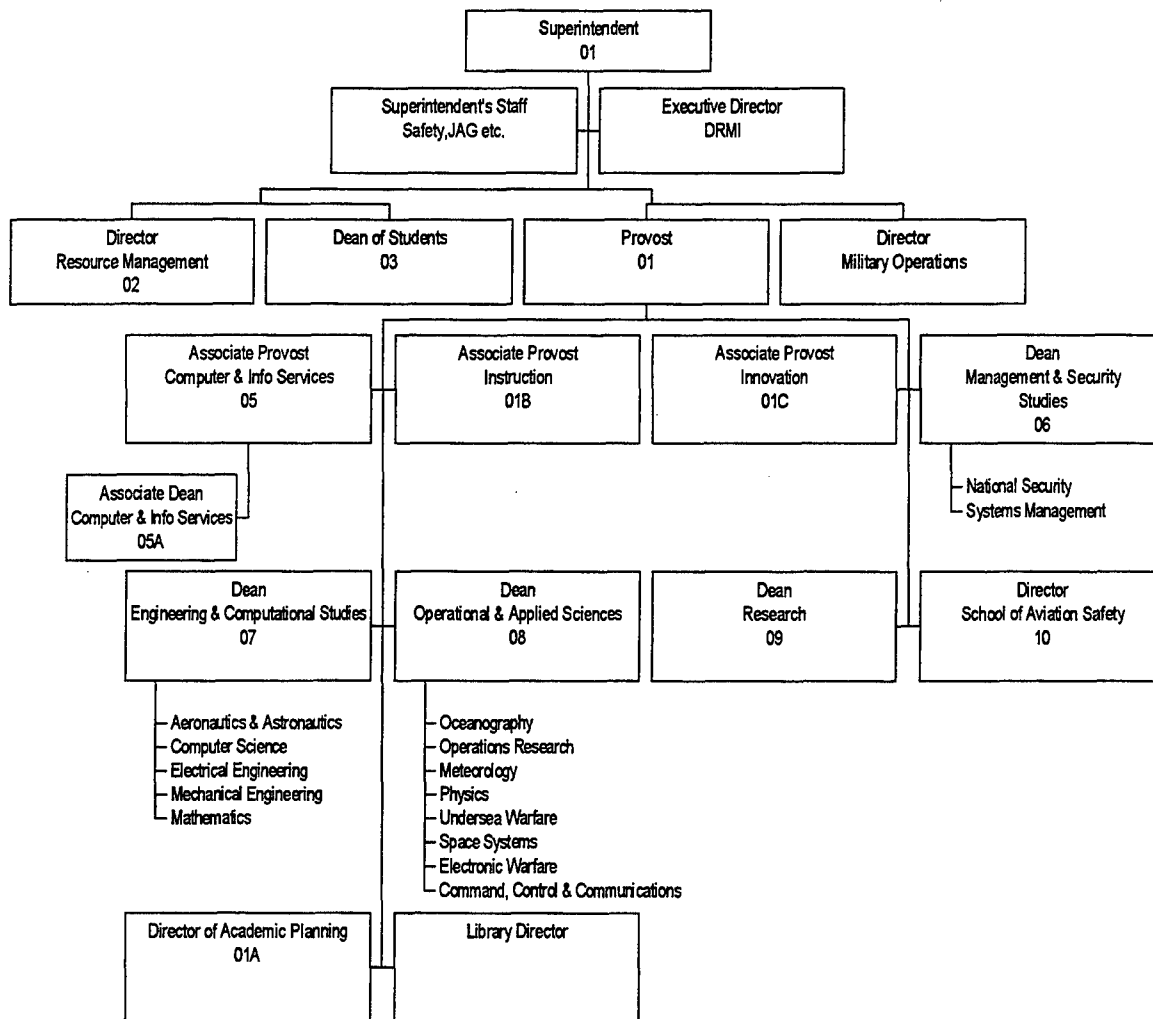


Figure 3-3. NPS organizational chart.

There are three ranges of the cost per minute, labeled as, low, medium, or high. These costs were determined by using the base pay or salary of the individual performing the task. Benefits, housing allowances, BAS, leave, etc. were not considered when determining these costs, but were considered once a total process cost was established. In cases where only one individual performed that step, we used their actual pay salary to determine the cost and applied that cost across the low, medium, and high scenarios. In cases where there were multiple people performing the step, then the tables in Appendix C were used to determine

the low, medium, and high costs per minute. For example, if a step is completed by a GS5/7/9, then the low cost per minute would be the cost of a GS-5 step 1, the medium cost would be an average of a GS-5 step 5, GS-7 step 5, and a GS-9 step 5, and the high cost would be cost per minute of a GS-9 step 10. There is no directly measurable cost to NPS for services provided by SATO. As a contracted concession, SATO pays the DON to have the opportunity to be the Navy's "travel agent"(Davies, 1996). Their involvement in the travel process adds time to the process but at no cost to NPS. Furthermore, SATO's current processes to handle manual inputs or TMP are virtually identical. The individual step times in minutes were calculated by taking an average of the range of response times provided by the stakeholders under each code who perform those tasks. Just as with the number of steps involved, the time each step takes has some variance between DTR's. There are a variety of methods in place to accomplish these steps with some being more efficient than others.

The total cost of each step is then determined by multiplying the time each step took by the cost per minute. Total time and total cost for each code can then be calculated. For comparison purposes, the cost of pre-travel and post travel for each of the codes is determined both without and with benefits. 43% of base salary is used to calculate the additional cost of benefits (Comptroller, 1996). Since the majority of participants in the travel process are civilian, the 43% civilian escalation rate is used.

The total costs of travel (with benefits) for each of the codes who traveled in FY95 are summarized in Table 3-1. The total cost of travel for each code is determined by the number of completed travel claims in FY95, using data from the Comptroller's data base (Comptroller, 1996).

OO/Staff	Low	Medium	High	Code 04	Low	Medium	High
Pre Travel Cost per request	\$47.18	\$55.44	\$67.10	Pre Travel Cost per request	\$43.99	\$54.85	\$67.00
Post Travel Cost per claim	\$14.46	\$16.78	\$19.53	Post Travel Cost per claim	\$10.74	\$12.43	\$14.55
Cost per travel process	\$81.64	\$72.22	\$86.63	Cost per travel process	\$54.73	\$67.28	\$81.55
#of Travel processed in FY95	164	164	164	#of Travel processed in FY95	314	314	314
Total Cost of Administrating Travel	\$10,109.67	\$11,844.49	\$14,207.91	Total Cost of Administrating Travel	\$17,186.45	\$21,125.90	\$25,607.17
Code 01				Code 05/05A			
Pre Travel Cost per request	\$38.72	\$43.56	\$48.63	Pre Travel Cost per request	\$38.04	\$42.88	\$47.96
Post Travel Cost per claim	\$23.39	\$24.66	\$26.29	Post Travel Cost per claim	\$16.17	\$17.44	\$19.07
Cost per travel process	\$62.11	\$68.22	\$74.92	Cost per travel process	\$54.21	\$60.33	\$67.03
#of Travel processed in FY95	30	30	30	#of Travel processed in FY95	69	69	69
Total Cost of Administrating Travel	\$1,883.20	\$2,046.53	\$2,247.67	Total Cost of Administrating Travel	\$3,740.77	\$4,162.43	\$4,625.05
Code 01B				Code 06 Curriculums			
Pre Travel Cost per request	\$37.29	\$42.22	\$47.38	Pre Travel Cost per request	\$54.34	\$73.30	\$90.33
Post Travel Cost per claim	\$13.68	\$14.94	\$16.57	Post Travel Cost per claim	\$14.39	\$18.00	\$21.65
Cost per travel process	\$50.97	\$57.17	\$63.96	Cost per travel process	\$68.72	\$91.29	\$111.98
#of Travel processed in FY95	22	22	22	#of Travel processed in FY95	1613	1613	1613
Total Cost of Administrating Travel	\$1,121.23	\$1,257.64	\$1,407.10	Total Cost of Administrating Travel	\$110,849.32	\$69,171.17	\$180,618.96
DRMI				Code 07 Curriculums			
Pre Travel Cost per request	\$49.69	\$54.92	\$60.33	Pre Travel Cost per request	\$46.05	\$57.62	\$71.74
Post Travel Cost per claim	\$16.76	\$18.02	\$19.66	Post Travel Cost per claim	\$15.29	\$18.19	\$21.89
Cost per travel process	\$66.45	\$72.94	\$79.99	Cost per travel process	\$61.35	\$75.80	\$93.63
#of Travel processed in FY95	295	295	295	#of Travel processed in FY95	1651	1651	1651
Total Cost of Administrating Travel	\$19,602.29	\$21,517.23	\$23,597.22	Total Cost of Administrating Travel	\$101,282.65	\$125,151.41	\$154,582.18
Code 013				Code 08 Curriculums			
Pre Travel Cost per request	\$54.09	\$59.01	\$64.16	Pre Travel Cost per request	\$44.98	\$54.03	\$63.22
Post Travel Cost per claim	\$15.79	\$17.06	\$18.69	Post Travel Cost per claim	\$14.52	\$17.57	\$21.67
Cost per travel process	\$69.88	\$76.07	\$82.85	Cost per travel process	\$59.51	\$71.60	\$84.90
#of Travel processed in FY95	19	19	19	#of Travel processed in FY95	1616	1616	1616
Total Cost of Administrating Travel	\$1,327.73	\$1,445.27	\$1,574.10	Total Cost of Administrating Travel	\$96,161.59	\$115,698.00	\$137,192.88
Code 02				Code 09			
Pre Travel Cost per request	\$32.43	\$37.45	\$42.70	Pre Travel Cost per request	\$53.91	\$58.75	\$63.83
Post Travel Cost per claim	\$10.25	\$11.52	\$13.15	Post Travel Cost per claim	\$21.56	\$22.83	\$24.46
Cost per travel process	\$42.68	\$48.96	\$55.85	Cost per travel process	\$75.47	\$81.58	\$88.29
#of Travel processed in FY95	185	185	185	#of Travel processed in FY95	10	10	10
Total Cost of Administrating Travel	\$7,895.23	\$9,058.43	\$10,331.50	Total Cost of Administrating Travel	\$754.71	\$815.82	\$882.87
Code 03				Code 10			
Pre Travel Cost per request	\$52.73	\$71.52	\$93.63	Pre Travel Cost per request	\$37.96	\$42.95	\$47.49
Post Travel Cost per claim	\$16.33	\$19.46	\$23.18	Post Travel Cost per claim	\$15.92	\$17.19	\$18.82
Cost per travel process	\$69.06	\$90.98	\$116.81	Cost per travel process	\$53.88	\$60.14	\$66.31
#of Travel processed in FY95	796	796	796	#of Travel processed in FY95	60	60	60
Total Cost of Administrating Travel	\$54,971.14	\$72,420.13	\$92,977.82	Total Cost of Administrating Travel	\$3,233.02	\$3,608.56	\$3,978.65
	Low	Medium	High				
Total Cost of Admin of Travel NPS	\$430,099.01	\$459,323.00	\$653,831.09				
Average Cost per process	\$62.84	\$67.11	\$95.53				

Table 3.1. Total Cost of Travel for NPS.

D. TIME

The total average time required to complete both the pre-travel and post-travel processes vary significantly between the different codes. This variation can be attributed to several factors. First, the number of steps that each code must complete varies due to the number of people involved in the process. The number of steps increases for student travel, as there are additional faculty who must approve student travel. Some departments have combined steps so that they are completed by one person while other departments have separated those functions. We found that the decision to combine or separated steps is typically precipitated by the need to balance departmental administrative workloads. It is important to note that some departments have placed significantly more of the process responsibility on the traveler, thus reducing the staff workload.

Another reason for time variations is the degree of department specific automation that is incorporated into travel processing. DTRs vary in the degree to which their internal process is computer as opposed to typewriter based. Overall, we found a high degree of process variability among DTRs in the way travel orders were created and processed. Virtually all the DTRs have developed their own way of completing the required forms, based on level of administrative expertise and available technology located within their own area.

Table 3-2 shows a summary of the time needed for the 14 codes to complete the travel process.

Code	Pre-Travel time in Minutes	Post-Travel Time in Minutes	Total Time
00/Staff	188	61.5	249.5
01	143	79.5	222.5
01B	141	53.5	194.5
013	189	60.5	249.5
DRMI	197.5	69.5	267
02	135	45.5	180.5
03	231.2	72.55	303.75
04	181.4	48	229.4
05	147	63.5	210.5
06/Currics	231.4	64	295.4
07/Currics	184.9	66.6	251.5
08/Currics	181.7	64.6	246.3
09	181	78.5	259.5
10	151	63.5	214.5
Average Time			241.03

Table 3-2. Manual system processing time for NPS.

IV. BASELINE COST OF TMP PILOT PROJECT

Travel Manager Plus is a software program designed by GELCO Government Network. As stated in the handbook from NPS (1996):

Travel Manager Plus is designed to simplify document processing and procedures. All documents which include travel authorizations, travel vouchers and local vouchers can be created, modified or deleted and reports can be generated. Up-to-date per diem rates and system-generated travel authorizations and travel vouchers are available online. Travel manager provides the capability to process travel documents electronically.

It is designed to enable each traveler to access TMP and initiate the travel process. Ideally, all stakeholders in the travel process have access to TMP, via a local area network, which enables them to complete the travel process electronically. Our research revealed that TMP has been implemented at following five DON locations: (Brown, 1996)

- Naval Postgraduate School
- Naval Undersea Warfare Center, Newport
- Naval Command, Control and Ocean Surveillance System, SD
- Personnel Support Activity, Norfolk
- Headquarters, Commander In Chief, Pacific Fleet, Pearl Harbor

A. CURRENT STATUS OF TMP AT NPS

Three departments are currently using Travel Manager Plus. Electronic and Computer Engineering (ECE) and Mechanical Engineering (ME) were the first to utilize the process with Systems Management (SM) coming onboard in July 1996. Ideally, all faculty within these departments have the opportunity to enter their own data into TMP and complete their own travel planning. In reality, each of the involved departments have different levels of faculty participation. Mechanical Engineering has no faculty who initiate their own travel. They are using their DTR to enter the data and monitor their travel processing. Systems Management has 3 faculty who have access to TMP on their own computers and are utilizing the system. The rest of the SM faculty utilize the DTR to initiate their travel. Electronic and Computer Engineering has a significant portion of their faculty initiating their own travel using TMP. At the time this research was being conducted, there were a total of 46 NPS staff members who have obtained the necessary personal identification number (PIN) to initiate their own travel. (Lynch, 1996) TMP is only being utilized for faculty travel at this time.

B. COSTS OF TMP

The initial installation of Travel Manager Plus cost \$24,588. This was purchased in FY95, and included a one year technical support package, major version upgrades and per diem rate updates, and on-site installation and setup. (Rhodes, 1996). All other travel costs and future costs if fully implemented will be further discussed in Chapter V.

1. Hardware

The initial implementation of TMP at NPS required no dedicated hardware purchases; sufficient capacity was available on existing NPS computer hardware. NPS has provided the CTO (SATO) a computer and printer on a temporary basis to integrate them with the TMP system. Understandably, the CTO could not be expected to purchase hardware for this system given their current contractual relationship with the DON.

2. Personnel Costs

We were not able to capture personnel costs associated with the initial TMP implementation. There were no data available that would provide a clear accounting of the time and associated costs expended. However, records did indicate that there was significant time dedicated by the initial Reinvention officer, LCDR Bob Forwood, and his replacement, LT Star Rhodes, as well as the individual members of the travel Process Action Team (PAT). They spent time studying the travel system and getting TMP off the ground. Additionally, in March 1996, the Comptroller's office dedicated a GS-12 solely as the TMP Systems Administrator.

C. LIMITATIONS OF TRAVEL MANAGER PLUS

The Defense Finance and Accounting Service (DFAS) is responsible for validating software used in testing the proposed Defense Travel System at selected pilot test sites, of which NPS is one (Scearce, 1996). DFAS has mandated that twelve specific travel scenarios be precluded from TMP:

- Group Travel
- Essential Unit Messing
- Field Duty
- Vessel Travel or TAD/TDY aboard ships
- Locations with "Per Diem Rate Footnotes"
- Hospital and Rehabilitation Center Travel and Stays
- United Peacekeeping Organizations
- Personally Procured Transportation
- Long-term TDY/TAD
- TDY/TAD with: Leave, Voluntary or Authorized Return Trips, Shipment of Household Goods, Storage of Household Goods, Accompanying Dependents, Joint Task force, Private Auto Mileage other than terminal mileage, Lodging overnight not required and Constructive Travel.
- Split Accounting
- Invitational Travel Orders

Specific guidance issued by DFAS indicated that the test sites vary as to how much of their travel falls into these exempted categories. This was also the case at NPS. The Systems Management DTRs estimated that only 1% of their travel could not be completed with TMP. Electronic and Computer Engineering estimated that 20% of their travel fell into the exempted categories. Mechanical Engineering estimated that 30% of their travel could not be done on TMP. Further investigation of the TMP process in the Mechanical Engineering department revealed that the

most common reason for inability to use TMP was their faculty's tendency to take leave in conjunction with travel. The second most common reason was the use of split accounting. (Bartolini,1996) Because Systems Management only recently implemented TMP, experience from the other two groups was used to determine the average percentage of travel requiring manual processing.

D. APPROACH TO DETERMINE COSTS

Personal interviews with the three DTRs involved with TMP at NPS identified the steps required to complete the travel process utilizing TMP. The time required for each step in the process was estimated by those who performed that step. For comparison purposes, we only captured the steps and costs involved in the processes directly performed by DTRs and administrative support personnel. The traveler's involvement is not included. The same methodology used for the manual process (Chapter III) was used to determine actual process costs for TMP.

E. TMP BASE LINE COSTS

When analyzing the data presented in Appendix D, there is a cost and time difference between the two ways that Travel Manager Plus is being utilized. Two of the test sites have partially implemented the TMP system. This means that the traveler fills out a travel request form, Appendix E, and gives that form to the DTR to input into the TMP system. The DTR is then responsible for inputting the traveler's data, and later reviewing the data in TMP for accuracy. In a full implementation scenario, similar to that currently implemented in ECE, the

travelers are required to input their own travel data into the computerized system and must later review the data when it returns from SATO. When comparing the administrative time for the two methods, the difference is that time required by the DTR to input the travelers' data.

The average costs and time to complete a travel process under both the Partial and Full TMP implementation are summarized in Table 4-1. Analysis of time and cost per process for travel reveals distinct savings utilizing TMP. Those savings are further examined in Chapter V.

	Partial Implementation	Full implementation
Low	\$37.87	\$28.92
Medium	\$39.95	\$32.47
High	\$42.39	\$36.49
Total Time	142.25	104.5

Table 4-1. Average cost per travel process using TMP.

V. TMP BASELINE V.S. NPS BASELINE ANALYSIS

Chapter III and IV described the estimated baseline costs for both the manual and TMP travel administration processes. This chapter will compare both systems in terms of estimated costs and time. The goal is to provide the reader with information for further travel reengineering efforts.

A. TIME COMPARISON

Table 5-1 shows the average administrative times it takes to complete the travel process via the three options we are comparing.

	Manual	Partial Implementation	Full Implementation
Total time to complete one travel process	241.03 min.	142.25 min.	104.5 min.
Savings of:	————	98.78 min.	126.53 min.

Table 5-1 . Time comparisons.

There are substantial administrative time savings realized with the implementation of TMP for the individual DTR's and for comptroller personnel. However, due to the current incompatibility between TMP and their other required computer software, PSD personnel are unable to realize any costs savings related to TMP implementation.

Closer scrutiny of responses received from travelers surveyed revealed a significant variation in estimated time required to complete their portion of the travel process. For the pre-travel process, responses concerning the length of time required to fill out the traveler's request form ranged from 2 to 90 minutes, with an

average time of 24.45 minutes. Since this same form is required with both the manual and TMP partial implementation processes, there is no identifiable time savings on behalf of the traveler. In addition, the traveler spends an average of 5 minutes with the DTR, providing the DTR with the completed form and reviewing the form with the DTR. For the full implementation, the traveler directly inputs the data into the system. This eliminates the need for filling out the travel request form. ECE faculty estimated it required somewhere between 10 and 30 minutes to complete this task. It is reasonable to infer from the ECE responses that a significant variation in process times could occur throughout the system if TMP were fully implemented NPS wide. The most likely explanation for this variation in traveler input times stems from the various degrees of familiarity with entering data in the TMP system and the willingness of the participants to shift from recording data on a paper request form to recording this data electronically.

For the post-travel process, the average estimated time required of the traveler for the manual process was 22.4 minutes. During this time, the traveler gets a travel claim worksheet from the DTR, fills it out and returns it to the DTR to be typed. The traveler must then return later to sign to sign the completed document. With partial implementation, the same steps and time applies. With full TMP implementation, the travelers would directly input claims and would not have to make several trips to the DTR to complete the process. The average time for the ECE faculty to input the claim data is 20 minutes. This does reduce the time requirement for the traveler.

B. TOTAL COST COMPARISON

To estimate the total cost of TMP, an average of 25% was used to determine what portion of travel requests could not be processed by TMP because of DFAS restrictions.(Bartolini/Netzorg, 1996) Of the 6844 travel processes completed in FY95, an estimated 5,133 could be completed on TMP; the remaining 1711 would have to be completed using the manual system. Table 5-2 shows a yearly cost review of travel between the manual system and partial and full implementation of TMP.

	Manual	Partial Implementation of TMP	Full Implementation of TMP
Low	\$430,099.01	\$301,911.46	\$255,971.11
Medium	\$459,323.00	\$319,894.10	\$281,483.35
High	\$653,831.09	\$381,045.64	\$350,760.94

Table 5-2 . Total Cost Comparison between Manual and TMP.

C. OUTLAYS AND SAVINGS

To determine the Net Present Value (NPV) and the Internal Rate of Return (IRR) of the TMP system, the initial outlays and estimated savings of TMP were determined. From data given by Rhodes(1996), the following outlays (Table 5-3) were estimated for year 1995-2000.

YEAR	OUTLAY	EXPLANATION
1995	\$24,588.00	Initial installation
1996	\$47,077.62	Travel expenses/Administrator salary/benefits-GS12
1997	\$208,511.59	Software deployment base wide/Maintenance fee/Administrator salary

1998	\$88,511.59	Maintenance fee/Administrator salary
1999	\$88,511.59	Maintenance fee/Administrator salary
2000	\$88,511.59	Maintenance fee/Administrator salary
Totals	\$526,313.39	

Table 5-3. Summary of outlays for TMP.

The largest future expense would be the for the software deployment NPS-wide, at a cost of \$120,000 plus a 20% annual maintenance fee. The second largest expense, occurring on an annual basis, is the salary and benefits of the TMP System Administrator.

Other costs that may occur in the future, but were not included in this study, are the costs involved for future software upgrades (4.1E). Presumably, these upgrades would further improve TMP's operations, but estimating the impact is beyond the scope of this thesis. Also not included are potential travel costs incurred when GELCO representatives are needed for on-site support. These visits typically cost between \$800-\$1,100 for a two day stay and are governed by the current GSA contract.

Utilizing the estimated average costs of travel processing determined in Chapters II and III, Table 5-4 illustrates the costs savings identified using TMP, both partial and full implementation.

Partial Implementation	Low	Medium	High
Cost of Travel using TMP(5,133 processes)	\$194,386.71	\$205,063.35	\$217,587.87
Cost of Travel Manually (1711 processes)	\$107,524.75	\$114,830.75	\$163,457.77
Total Cost	\$301,911.46	\$319,894.10	\$381,045.64
Total Cost Manually (6844 processes)	\$430,099.01	\$459,323.00	\$653,831.09

Net Annual Savings :	\$128,187.55	\$139,428.90	\$272,785.45
Full Implementation			
Cost of Travel using TMP(5,133 processes)	\$148,446.36	\$166,652.60	\$187,303.17
Cost of Travel Manually (1711 processes)	\$107,524.75	\$114,830.75	\$163,457.77
Total Cost	\$255,971.11	\$281,483.35	\$350,760.94
Total Cost Manually (6844 processes)	\$430,099.01	\$459,323.00	\$653,831.09
Annual Net Savings:	\$174,127.90	\$177,839.66	\$303,070.15

Table 5-4. Cost savings summary of Partial and Full implementation of TMP.

D. NET PRESENT VALUE (NPV), INTERNAL RATE OF RETURN (IRR) AND PAYBACK PERIOD(PB)

To calculate the NPV of both the partial and full TMP implementation, a real discount rate of 2.7% was used as mandated in the OMB Circular A-94, Appendix C dated 2 February 1996. Appendix F gives a detailed breakdown of the net savings for the years 1995-2000. Table 5-5 shows the three financial indicators (NPV,IRR,PB) for the investment in TMP.

	NPV	IRR	Payback
Partial			
Low	\$(53,849.43)	-12%	7.24 Yrs
Medium	\$(13,946.56)	-1%	6.08 Yrs
High	\$459,422.63	100%	3.13 Yrs
Full			
Low	\$109,222.77	29%	4.43 Yrs
Medium	\$122,398.22	32%	4.32 Yrs
High	\$566,922.74	119%	2.93 Yrs

Table 5-5. Summary of NPV, IRR, Payback Period for TMP

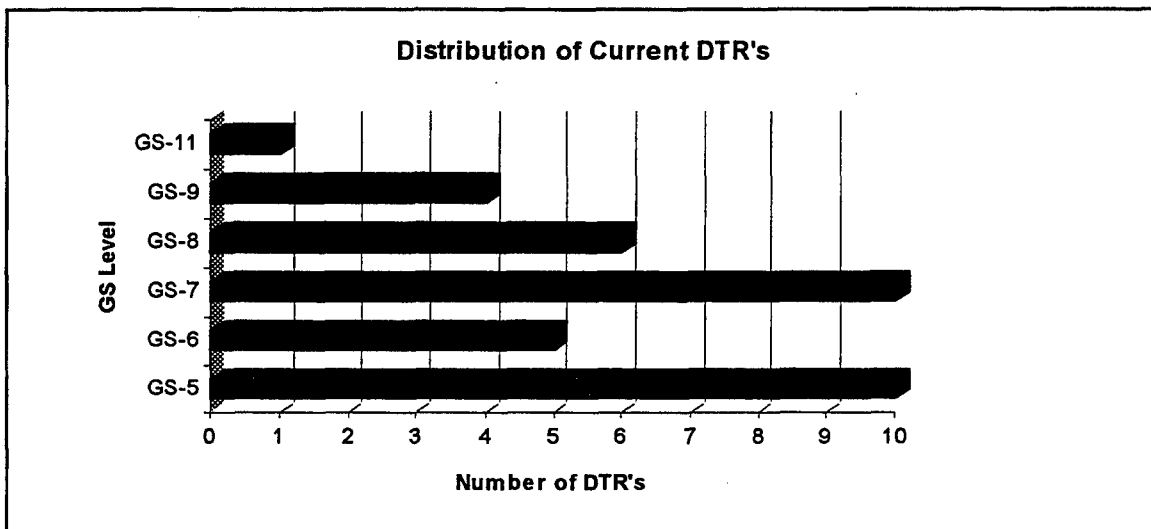


Table 5-6. Distribution of DTR's at NPS currently.

The above table shows that implementation of TMP is not a profitable investment with Partial Implementation unless you have the highest level of employees performing the manual system in all codes within NPS. With full implementation, the investment is a positive investment at all levels of task performers.

It must be noted that when looking at the results in Table 5-5, the net savings being used to calculate NPV, IRR, and Payback assume implementing TMP NPS-wide using GS-5 DTR's for partial Implementation and a GS-8 for full implementation. This reflects the actual DTR levels for SM, ME and ECE. The survey range for the DTR's involved with the manual system varied from GS-5 thru GS-11(Table 5-6).

If an NPS-wide implementation of TMP were to utilize the same DTR's currently administering the manual system, Table 5-7 would reflect the NPV, IRR, Payback under that circumstance. TMP implementation using this scenario would

have a lower NPV and IRR.

	NPV	IRR	Payback
Partial			
Low	\$(67,150.29)	-16%	7.78 Yrs
Medium	\$(62,048.31)	-15%	7.56 Yrs
High	\$366673.91	83%	3.31 Yrs
Full			
Low	\$92,824.45	25%	4.57 Yrs
Medium	\$99201.86	27%	4.51 Yrs
High	\$534,490.50	114%	3.03 Yrs

Table 5-7. NPV, IRR, and Payback using current DTR's for each code.

Table 5-8 provides a breakdown of the cost per travel process for the manual system, TMP partial implementation and TMP full implementation. This table also illustrates the effect of consolidating and/ or restructuring DTRs so as to have a GS-5 pay level employee assigned as the DTR.

	Manual	TMP Partial Implementation	TMP Partial Implementation	TMP Full Implementation	TMP Full Implementation
		Using Current DTR	Using All GS-5	Using Current DTR	Using All GS-5
Low	\$62.84	\$38.60	\$37.87	\$29.82	\$27.76
Medium	\$67.11	\$42.59	\$39.95	\$33.74	\$31.65
High	\$95.53	\$47.48	\$42.39	\$38.27	\$36.01

Table 5-8. Cost per process.

E. OTHER POSSIBLE SCENARIOS AND THEIR EFFECT

If TMP is implemented NPS-wide, there are various ways in which it could be set into motion. We have shown what the estimated effects on the bottom line would be if we focus solely on personnel and the related consolidation and/or transfer of DTR responsibility to lower pay scales.

Another approach to cost minimization involves mitigating the software, hardware and maintenance costs associated with fully implementing the TMP system. Any renegotiation and related cost reductions would have to be accomplished in conjunction with the renewal of the current GSA contract that expires on December 31st, 1996.

Another major cost driver to the TMP implementation is the full time System Administrator. Currently a GS-12 position, we calculated the costs reduction possible (using NPV and IRR) if this position could be gradually reduced to a GS-7 by the year 1998 (after the system is implemented and personnel trained). With this adjustment, outlays could be reduced in 1998-2000 to \$64,472.58 from \$88,511.59 a year. Assuming that NPS is using GS-5 as the DTR in partial implementation or a GS-8 for full implementation, Table 5-9 shows the final outcome.

	With current DTR	With GS-5	With current DTR	With GS-5
	NPV	NPV	IRR	IRR
Partial				
Low	\$(4,012.65)	\$9,288.21	2%	5%
Medium	\$1,089.33	\$49,191.08	3%	14%
High	\$429,811.55	\$522,560.27	91%	107%
Full		With GS-8		With GS-8
Low	\$15,596.09	\$172,360.41	37%	41%
Medium	\$162,339.50	\$185,535.86	39%	44%
High	\$597,628.14	\$630,060.38	120%	126%

Table 5-9. NPV/IRR if Administrator reduced to GS-7 in year 1998.

Overall, the results are better for implementation of TMP if costs can be reduced using a lower grade as the administrator of TMP.

If the restrictions on the types of processing precluded from TMP could be reduced, the results are much better for TMP. With a reduction to 15% of all travel being completed manually, Table 5-10 illustrates the NPV and IRR. All NPV's are positive in this situation.

	NPV	IRR
Partial		
Low	\$6,820.03	4%
Medium	\$52,043.29	16%
High	\$588,528.36	123%
Full		
Low	\$191,635.19	47%

Medium	\$206,567.37	51%
High	\$710,361.82	144%

Table 5-10. NPV/IRR with only 15% of all claims processed manually.

F. SUMMARY

Based solely on cost, there are some scenarios where TMP may not be the most cost-effective system to implement at NPS. There are other considerations that are important other than cost in which TMP looks very promising. The time reduction in the travel process is the highlight. Much less time and less frustration for the employees involved in the process can be achieved using TMP. Those items factor significantly when considering employee satisfaction.

VI. BENCHMARKS

A. OVERVIEW

During a Senate hearing in March of 1996, a member on the Senate Governmental Affairs Committee commented "It is the submerged or hidden costs of administering government travel that has too long been overlooked and can provide billions of dollars in savings." (Cohen, 1996). In July of 1996, the Director of Information Resources Management in the General Accounting Office (GAO) testified before the House Committee on Governmental Reforms. In his opening testimony he stated "Travel is one of many processes across the government that, through the adoption of best private sector practices and aggressive streamlining efforts, can yield substantial savings to taxpayers." (Brock, 1996) According to a 1994 GAO report, about 75% of all federal government agencies can not even identify the administrative costs that were associated with travel. It is attention of this type at the highest level of the government administration that provided the catalyst for this thesis chapter. In a recent article in Management Today, the managing director of a benchmark consulting firm wrote "One of the first benefits of benchmarking is that companies look at what they're actually doing." (Van de Vliet, 1996)

B. DEFINING THE PROCESS

1. Benchmarking defined

Benchmarking in the context of a comparative performance technique began at the Xerox corporation in 1982; the term "competitive benchmarking" was used in discussions relating to the tremendous performance gap between Xerox and its competitors. As a result, specific standards of measurement, or metrics, in areas such as production costs, and cycle time were identified and the performance of Xerox was ranked in comparison to its chief market rivals. (Spendolini, 1996)

There are numerous texts that define "benchmarking" and outline the process of benchmarking an organization. Spendolini defines benchmarking as "the continuous, systematic process for evaluating the products, services, and work processes of organizations that are recognized as representing the best practices for the purpose of organizational improvement" (Spendolini, 1992). Robert Camp defines benchmarking as "the process of measuring products, services, and practices against the toughest competitors or those companies recognized as industry leaders." (Camp, 1989)

2. Related terminology

The following terminology is applicable:

- *Metric benchmarking*: The use of quantitative measures as reference points in the benchmarking process.
- *Best practice benchmarking*: Used to focus on identifying outstanding techniques.

- *Best in business benchmarking*: Used to focus on identifying outstanding companies.
- *Best in class benchmarking*: Used to focus on identifying outstanding companies within a particular subcategory of the travel administration arena.
- *Internal benchmarking*: Used within an agency or organization to compare similar business processes.
- *External benchmarking*: Used to compare similar business processes with agencies outside of an organization.

Using performance metrics, as mentioned in Chapter II, is essential to the benchmarking process. These metrics enable management to obtain a performance baseline for their agency. This baseline can then be compared to the benchmark of those similar internal or external agencies that have been identified as "Best in Business" through the organization's benchmarking efforts.

3. Federal Legislation and Guidelines

There is significant legislation that directly and indirectly implies that performance metrics and the benchmarking process are to be a part of any government agency's management strategy. An overview of the two more significant pieces of legislation follows.

a. Chief Financial Officers (CFO) Act

The CFO Act, enacted in 1990, was designed to correct long standing shortcomings in financial systems, internal controls and asset use. Agency CFO's are tasked with producing timely, reliable and useful financial information regarding the management of their organization.(CFO Act, 1990) .

b. *Information Technology Reform Act*

The Information Technology Reform Act has specific language requiring all federal government agency heads to quantitatively benchmark their process performance in terms of costs, speed, productivity and quality against comparable organizations in both the public and private sectors where they exist. (Hoenig, 1996)

C. IDENTIFYING BEST IN BUSINESS ORGANIZATIONS

1. Strategy

Spendolini (1992) observes that the benchmarking process requires significant time and financial resources in order to have the maximum benefit. Furthermore, organizations that successfully incorporate benchmarking recognize that organizational behavior and performance are not static over time, rather they are dynamic and must be constantly updated. Our intention is to illustrate, in a limited yet easily applicable fashion, the benefits and utility of benchmarking in the NPS travel process.

2. Scope

There are many metrics and methods used within the travel industry to gauge performance. Many studies directly related to the macro issue of improving travel management government wide have been completed and/or ongoing (JFMIP, 1995). Rather than approach benchmarking from this broad perspective, we chose to limit our research to metrics and issues already defined by other agencies, facilitating ready comparisons between similar functions within different

agencies. In his article "Finding the Right Reengineering Process." Timothy Feary states "the easiest way to fail in reengineering is to define too many processes, to go after too many areas, and to "micro-focus" on how to maximize the performance in one specific process." (Feary, 1996) This further supports our contention that the best strategy is to limit metric usage to simple, easy to comprehend measures at first. As processes becomes better defined and understood, more sophisticated metrics can be derived to serve more specific needs. Furthermore, we viewed this portion of the thesis as one ripe for further research once NPS adopts a basic set of metrics. As mentioned earlier in Chapter II, the four basic metrics most commonly identified, and thus most prevalent are:

- Number of steps in a travel process (from requesting the initial reservation and planning through final claim settlement)
- The average time to complete the steps in a given travel process
- The average cost per claim to administer the travel process within an organization or agency.
- Administrative cost as a percentage of actual travel cost

These four basic metrics allow comparative analysis across a wide range of travel administration processes if so desired. For instance, we can determine the overall effect on costs as we reduce the skill level required (by implementing software and hardware to compensate for skill reduction) to complete a specific series of tasks. Additionally, recently completed congressional subcommittee testimony centers around these three quantitative factors as viable comparative tools.

Given the constraints and scope of this thesis, we chose to approach the benchmarking process by looking for 'best in business' practices identified through research conducted by other government agencies. In order to maximize the comparison, these agency(s) would also fall under the Joint Travel Regulations (JTR) and the Joint Federal Travel Regulations (JFTR).

3. The National Security Agency (NSA)

The National Security Agency has recently established a Travel Reengineering Team (TRT). Their approach to benchmarking mirrors the approach that we recommend if the NPS were to decide to conduct a "full blown" benchmarking effort. They established a goal to become the "best in class" at providing excellent service by streamlining, simplifying and redesigning travel and all the processes associated with it. After the selection of TRT members was completed, the 6 member team spent the next 8 months completing a comprehensive benchmarking study of 40 agencies (government and commercial). From the original group of 40, NSA narrowed the field down to 8 companies that they wanted to look at more closely. The team then performed site visits to the narrowed field of participants. (NSA, 1994).

4. Benchmark Comparisons

As previously mentioned, our research revealed a wide variety of metrics in use by those interested in travel administration. In addition the reason that we have already mentioned, we also chose metrics that were already widely used by the

travel administrators in the public and private sector. We felt these would provide the most value to our cost benefit analysis.

a. *Estimated Process Times*

Some metrics, such as process times, were most likely developed to measure qualitative aspects of travel administration. The generally accepted belief is that quicker process times equate to happier customers, therefore, these numbers could be used to gauge customer satisfaction. However, reduction in process times also directly effects travel administration costs, so it is a good quantitative metric for use in cost benefit analysis.

b. *Average Number of Steps*

This metric is another industry standard and it also has qualitative and quantitative implications. Reductions in the number of steps generally indicate a faster travel administration process and this generally has a positive impact on the quality of service rendered to the customer. Quantitatively, eliminating process steps typically reduces cost by lowering employee and equipment requirements.

c. *Cost Per Voucher*

The average cost per voucher is a popular metric obviously affected by both the estimated process time and the average number of steps. However, the inverse is not necessarily true. Cost per voucher can be impacted by such factors as employee wages, hardware and software procurement and upgrade costs, and per voucher software cost.

d. Administrative Cost as % of Actual Travel Cost

This particular metric is also popular in the travel administration business. It seems to be most useful when comparing travel administration processes with others external agencies. It is most effective when it is used to compare identical processes. When used for comparison between two agencies with slightly different missions, it can give misleading results. For example, two organizations complete the same number of travel processes in a given year. However, one organization's travel was predominantly overseas, while the other organization's travel was primarily domestic. The "overseas" organization's percentage of administrative travel costs would be lower due to higher actual overseas travel costs. Tables 6-1, 6-2, 6-3 and 6-4 provide information that facilitates benchmarking comparisons between NPS, NSA and other agencies.

Table 6-1 reflects NPS process times as determined by our survey results. Process times range from the existing manual process, estimated at 289 minutes, to full TMP implementation, with an estimated process time of 147 minutes. Using these figures, the best case scenario would yield a 49% reduction in process time.

Table 6-2 reflects travel administration cost as a percentage of actual travel cost for FY95. These percentages were based on FY95 Total Actual Travel Cost of \$5,243,000 (Jay, 1996). Percentages were calculated using low, medium and high travel administration cost broken further down into manual, partial and full implementation. Further breakdown is provided to display comparison with estimated travel administration cost included and excluded in total travel cost.

Since comparable figures provided by both GAO and Senate subcommittee minutes don't clearly indicate whether or not administration costs were included in their figures, we provided both option A (excluded) and B(included).

Table 6-3 reflects the average number of steps in both the Manual and TMP travel administration process at NPS obtained from our survey results.

Table 6-4 provides tabular comparison of the 4 basic metrics identified earlier in this chapter and in Chapter II. These metrics for NPS are compared to similiar metrics published in National Security Agency, Travel Reengineering Team Final Report, 1994.

	Manual (Current)	TMP Partial (Current)	TMP Full (Proposed)
Est. Traveler Time	51.85	51.85	40.0
Est. Process Time	241.03	142.25	104.5
Est. Total Time	292.88	194.1	144.5

Figure 6-1. Estimate Voucher Process Times From Survey.

Actual Travel Cost V.S. Travel Administration Cost Comparison			
	<i>Low</i>	Manual <i>Medium</i>	<i>High</i>
FY 95 Travel Expenditure	\$5,243,000	\$5,243,000	\$5,243,000
FY 95 Travel Admin Costs	\$430,099	\$459,323	\$653,831
Option A	8.20%	8.76%	12.47%
Option B	7.58%	8.06%	11.09%
	<i>Low</i>	Partial <i>Medium</i>	<i>High</i>
FY 95 Travel Expenditure	\$5,243,000	\$5,243,000	\$5,243,000
FY 95 Travel Admin Costs	\$241,188	\$258,246	\$315,599
Option A	4.60%	4.93%	6.02%
Option B	4.40%	4.69%	5.68%
	<i>Low</i>	Full <i>Medium</i>	<i>High</i>
FY 95 Travel Expenditure	\$5,243,000	\$5,243,000	\$5,243,000
FY 95 Travel Admin Costs	\$207,104	\$227,192	\$290,242
Option A	3.95%	4.33%	5.54%
Option B	3.80%	4.15%	5.25%

Figure 6-2. Actual Travel Cost VS. Travel Administration Cost Comparison.

Average Number of Steps: Manual V.S. TMP			
Group	Pre-Travel Steps	Post-Travel Steps	Total Steps
1	39	16	55
2	41	16	57
3	39	16	55
4	38	15	53
5	41	15	56
6	41	14	55
7	45	16	61
8	41	15	56
9	39	15	54
10	41	16	57
11	39	16	55
12	41	16	57
13	39	16	55
14	38	15	53
Avg. # of Steps	40	16	56
Group	Pre-Travel Steps	Post-Travel	Total
1	23	15	38
2	24	16	40
3	18	10	28
Avg # of Steps	22	14	36

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Figure 6-3. Average Number of Steps: Manual VS TMP.

Travel Comparison Benchmark Data							
	NPS (MAN)	NPS (TMP) Partial	NPS (TMP) Full	NSA (MAN)	NSA (NEW)	GAO (OLD)	GAO (NEW)
# of steps per voucher	56	36	36	17	5	59	12
Administrative costs per voucher	\$67.11	\$42.59	\$33.74		\$71.00	\$113.00	\$37.00
Administrative cost as a % of total travel costs	7.5% - 12.5%	4.4% - 6.0%	3.8% - 5.5%	27%		30% - 4.0%	Not available
Elapsed time per voucher (minutes)	293 minutes	194 minutes	145 minutes	490 minutes	140 minutes	60 -420 minutes	Not Available

Table 6-4. Travel Comparison Benchmark Data.

VII. RECOMMENDATIONS

A. CONCLUSIONS

Our research suggests the following conclusions:

- There are areas within the current manual system that could be improved to decrease the total administrative cost of travel at NPS. Steps in the process could be done more efficiently, or reduced by combining steps. More communication and sharing of ideas are needed to get all DTR's using similar techniques to complete the paperwork and to standardize the process. Of course, with improvement in the manual process, the cost per travel process will decrease for those remaining travel requests that can not be done on TMP. This will further reduce the value of TMP in the analysis.
- Utilization of Travel Manager Plus does have other benefits besides the monetary factor. The time saved for the DTR and the Comptroller office is substantial. In addition, from the interviews with the DTR's currently using the system, there seems to be agreement that the travel process runs more smoothly, and have which increases their quality of work life.
- When looking at the cost issues, TMP would look much better if the outlay costs could be reduced. The very high cost of base wide implementation and the salary of the administrator does not make TMP that attractive unless there is full implementation of the system. As shown in Chapter V, determining whether TMP will be implemented by the current mix of DTRs or reorganized to a lower grade mix of DTRs also plays a factor in the final cost figures for TMP.
- The issue between full implementation and partial implementation comes down to a quality of life issue for the faculty. There may be some resistance to full implementation due to resistance to change. That has been shown somewhat in the two test sites using partial implementation.

- Lastly, this thesis has identified that NPS needs to gather performance data. We have found very little performance measurement at NPS. Measurement lets you know where you are and where improvements can be made. TMP will assist DTRs and management to gather data more easily because computerized travel data will be available within TMP.

B. FOR FUTURE STUDY

- Conduct more in-depth benchmarking on the travel administration process at NPS.
- Conduct analysis to determine appropriate benchmarking partner for NPS.
- Analyze reasoning behind limitations currently placed on TMP by DFAS. Reductions of restrictions would increase utilization of TMP and in conjunction with other improvements, could make it more cost effective.
- Research current contractual agreement regarding use of TMP software. Especially worthy of closer scrutiny is the current fee structure. Current practice of charging a per voucher fee for software use could get exceptionally expensive if the DON were to consider a large scale implementation.

APPENDIX A: SURVEY

Naval Postgraduate School Estimated Travel Labor Costs

Pre-Travel Data Travel Manager Plus			
Step	Process Description	Time to perform task	GS-level of performer
1	Traveler picks up and completes required forms		
2	Traveler goes to Departmental Travel Rep. (DTR)		
3	DTR reviews forms		
4	DTR inputs travel data into TMP		
5	DTR electronically signs document		
6	DTR electronically sends document to CTO		
7	CTO books the reservation		
8	CTO inputs reservation data into TMP		
9	DTR/traveler reviews data for correctness		
10	DTR/traveler electronically signs document		
11	Document electronically sent to Acct. Tech. for review		
12	Acct. Tech. reviews and electronically signs/sends		
13	Department Chair reviews and electronically signs/sends		
14	Document processed at CTO		
15	Document received electronically by Comptroller's office		
16	Comptroller clerk obligates funds		
17	DTR picks up ticket from SATO		
18	DTR delivers ticket to traveler's box		

Naval Postgraduate School Estimated Travel Labor Costs

Post Travel Data for Travel Manager Plus			
Step	Process Description	Time	GS-level
		to perform task	of performer
1	Traveler goes to DTR		
2	DTR gives travel claim worksheet		
3	Traveler completes travel claim and attaches receipts		
4	Traveler returns completed form to DTR		
5	DTR inputs information into TMP		
6	DTR calls traveler to verify information		
7	Claim is electronically signed and sent to Acct. Tech.		
8	Acct. Tech. reviews and electronically signs/sends		
9	Department Chair reviews and electronically signs/sends		
10	PSD does claim processing		
11	Document is reviewed by Comptroller/sent		
12	DTR delivers original documents back to Traveler		
13	Traveler picks up check at PSD		

To assist us in the formulation of performance metrics for the travel system, the following questions are asked to gather participants inputs:

In terms of travel, what is the most important to you?

___ Timeliness (all aspects)

___ Accuracy (error free)

___ Minimal effort

___ Accessibility to information (dates, locations, airlines, etc.)

___ Reliable information (is it correct?)

___ Ability to make own travel arrangements

___ Reliability (Process performs without any breakdown)

___ One stop shopping (One place to go to have everything done-Travel arrangements, questions, advances, vouchers, etc.)

___ The authority necessary to make decisions necessary to accomplish the mission

In your opinion, what type of performance measures (general or specific) do you feel would be indicative of a highly functional travel process?

For those who have access to Travel Manager Plus, on a scale of 1-10, how would you rate the old and new travel process? (10=best, 1=worst)

Old travel process_____

New travel process_____

APPENDIX B: MANUAL SYSTEM TRAVEL DATA SHEETS

Pre-Travel Costs for Code 00/Staff

Rate of Task		Cost Per Minute			Step Time	Total Cost Per Minute		
Performer	Process	Low	Medium	High	In Minutes	Low	Medium	High
E5/E6 GS5/6	DTR drafts travel forms or reviews	0.1910	0.2211	0.2840	12.5	\$ 2.3875	\$ 2.7638	\$ 3.5500
	DTR computes preliminary cost figures	0.1910	0.2211	0.2840	12.5	\$ 2.3875	\$ 2.7638	\$ 3.5500
	SATO/Transportation gives quotes for estimates	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
	DTR faxes preliminary copy to SATO	0.1910	0.2211	0.2840	1	\$ 0.1910	\$ 0.2211	\$ 0.2840
	SATO receives request for travel	0	0	0	2	\$ -	\$ -	\$ -
	SATO makes reservations	0	0	0	14.5	\$ -	\$ -	\$ -
	SATO faxes copy of item to DTR	0	0	0	2	\$ -	\$ -	\$ -
	SATO gives copy of travel request to Transportation	0	0	0	1	\$ -	\$ -	\$ -
	Transp. files request until orders are received from Comptroller	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
	DTR types orders	0.1910	0.2211	0.2840	12.5	\$ 2.3875	\$ 2.7638	\$ 3.5500
GS12/O5	DTR takes orders to Department Head for signature	0.1910	0.2211	0.2840	2	\$ 0.3820	\$ 0.4422	\$ 0.5680
	Department heads signs orders	0.3498	0.3890	0.4788	5	\$ 1.7490	\$ 1.9450	\$ 2.3940
	DTR picks up signed orders	0.1910	0.2211	0.2840	3	\$ 0.5730	\$ 0.6633	\$ 0.8520
	DTR makes copies	0.1910	0.2211	0.2840	7.5	\$ 1.4325	\$ 1.6583	\$ 2.1300
	DTR takes orders to comptrollers	0.1910	0.2211	0.2840	10	\$ 1.9100	\$ 2.2110	\$ 2.8400
	Edit clerk reviews orders for admin. check/funds avail	0.1972	0.2268	\$0.26	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
	Supervisor reviews orders/Signs	0.3498	0.4406	\$0.54	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
	Edit Clerks finalizes review	0.1972	0.2268	\$0.26	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
	Transmittal is completed	0.1972	0.2268	\$0.26	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
	Copy to analyst for obligation	0.1972	0.2268	\$0.26	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
GS4	Edit clerk returns orders to Comptroller Travel Clerk	0.1972	0.2268	\$0.26	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
	Travel Clerk reviews orders	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
	Comptroller signs orders	0.7384	0.7384	0.7384	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
	Comptroller travel clerk breaks down/delivers to Transportation	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
	Transportation receives orders	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
	Transportation gives orders to SATO	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
	SATO inputs accounting data	0	0	0	3	\$ -	\$ -	\$ -
	SATO gives orders back to Transportation	0	0	0	1	\$ -	\$ -	\$ -
	Transportation Quality Control record and OK's it to be ticketed	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
	Transportation files packet in SATO's log book	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
E5/6 GS5/6	SATO cuts ticket	0	0	0	4	\$ -	\$ -	\$ -
	Transportation signs for ticket	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
	Transportation logs ticket in transportation log book	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
	Transportation files ticket and orders by date of travel	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
	Department Travel Clerk picks up ticket	0.1115	0.1638	0.1910	5	\$ 0.5575	\$ 0.8190	\$ 0.9550
	DTR gives traveler tickets/orders	0.1910	0.2211	0.2840	3	\$ 0.5730	\$ 0.6633	\$ 0.8520
	With Benefits	Totals	Totals	Totals	188	\$ 33.00	\$ 38.77	\$ 46.93
						\$ 47.18	\$ 55.44	\$ 67.10

Post Travel Cost For Code 00/Staff

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS5	0.1910	0.1910	0.1910	3	\$ 0.5731	\$ 0.5731	\$ 0.5731
Travel worksheet is typed/copies made	GS8	0.2184	0.2512	0.2840	10	\$ 2.1840	\$ 2.5120	\$ 2.8400
DTR takes signed claim to Comptroller Travel Clerk	E5/GS8	0.1115	0.1939	0.2840	5	\$ 0.5575	\$ 0.9695	\$ 1.4200
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
					61.5	\$ 10.11	\$ 11.74	\$ 13.66
		With Benefits				\$ 14.46	\$ 16.78	\$ 19.53
		Totals						

Process

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Post Travel Cost For DRMI

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS6	0.1893	0.1893	0.1893	1	\$ 0.1893	\$ 0.1893	\$ 0.1893
Travel worksheet is typed	GS6	0.1893	0.1893	\$0.19	15	\$ 2.8395	\$ 2.8395	\$ 2.8395
DTR takes signed claim to Comptroller Travel Clerk	GS6	0.1893	0.1893	\$0.19	10	\$ 1.8930	\$ 1.8930	\$ 1.8930
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
					69.5	\$ 11.72	\$ 12.60	\$ 13.75
		With Benefits				\$ 16.76	\$ 18.02	\$ 19.66
		Totals						

Pre-Travel Costs for Code 01

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
		Low	Medium	High		Low	Medium	High
DTR reviews travel needs	GS9	0.2654	0.2654	0.2654	1	\$ 0.2654	\$ 0.2654	\$ 0.2654
DTR computes preliminary cost figures	GS9	0.2654	0.2654	0.2654	3	\$ 0.7962	\$ 0.7962	\$ 0.7962
SATO/Transportation gives quotes for estimates	E5/6 GS5/6	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR faxes preliminary copy to SATO	GS9	0.2654	0.2654	0.2654	1	\$ 0.2654	\$ 0.2654	\$ 0.2654
SATO receives request for travel	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS9	0.2654	0.2654	0.2654	5	\$ 1.3270	\$ 1.3270	\$ 1.3270
DTR takes orders to Department Head for signature	GS9	0.2654	0.2654	0.2654	1	\$ 0.2654	\$ 0.2654	\$ 0.2654
Department heads signs orders	AD00	0.9128	0.9128	0.9128	1	\$ 0.9128	\$ 0.9128	\$ 0.9128
DTR picks up signed orders	GS9	0.2654	0.2654	0.2654	1	\$ 0.2654	\$ 0.2654	\$ 0.2654
DTR makes copies	GS9	0.2654	0.2654	0.2654	1	\$ 0.2654	\$ 0.2654	\$ 0.2654
DTR takes orders to comptrollers	GS9	0.2654	0.2654	0.2654	5	\$ 1.3270	\$ 1.3270	\$ 1.3270
Edit clerk reviews orders for admin. check/funds avail	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	0.3498	0.4406	0.5408	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	0.1972	0.2268	0.2564	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
Edit clerk returns orders to Comptroller Travel Clerk	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	0.7384	0.7384	0.7384	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Department Travel Clerk picks up ticket	GS9	0.2654	0.2654	0.2654	10	\$ 2.6540	\$ 2.6540	\$ 2.6540
DTR gives traveler tickets/orders	GS9	0.2654	0.2654	0.2654	1	\$ 0.2654	\$ 0.2654	\$ 0.2654
					143	\$ 27.08	\$ 30.46	\$ 34.01
					Totals	\$ 38.72	\$ 43.56	\$ 48.63
					Totals			
					With Benefits			

Post Travel Cost For Code 01

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS9	0.2655	0.2655	0.2655	1	\$ 0.2655	\$ 0.2655	\$ 0.2655
Travel claim is typed/calculations made	GS9	0.2655	0.2655	0.2655	30	\$ 7.9659	\$ 7.9659	\$ 7.9659
DTR takes signed claim to Comptroller Travel Clerk	GS9	0.2655	0.2655	0.2655	5	\$ 1.3276	\$ 1.3276	\$ 1.3276
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
	Totals				79.5	\$ 16.36	\$ 17.24	\$ 18.38
	With Benefits					\$ 23.39	\$ 24.66	\$ 26.29

Process

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Post Travel Cost For Code 01B

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
Travel claim is typed	GS8	0.2767	0.2767	0.2767	5	\$ 1.3835	\$ 1.3835	\$ 1.3835
DTR takes signed claim to Comptroller Travel Clerk	GS8	0.2767	0.2767	0.2767	5	\$ 1.3835	\$ 1.3835	\$ 1.3835
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
	Totals				53.5	\$ 9.56	\$ 10.45	\$ 11.59
	With Benefits					\$ 13.68	\$ 14.94	\$ 16.57

Pre-Travel Costs for Code 013

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
		Low	Medium	High		Low	Medium	High
DTR interviews traveler, draft forms on the spot	GS7	0.2498	0.2498	0.2498	8.5	\$ 2.1233	\$ 2.1233	\$ 2.1233
DTR computes preliminary cost figures	GS7	0.2498	0.2498	0.2498	12.5	\$ 3.1225	\$ 3.1225	\$ 3.1225
SATO/Transportation gives quotes for estimates	E5/6 GS5/6	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR takes forms to departmental accounting	GS7	0.2498	0.2498	0.2498	2	\$ 0.4996	\$ 0.4996	\$ 0.4996
Accounting approves preliminary cost figures	GS12	0.3498	0.4028	0.4558	1	\$ 0.3498	\$ 0.4028	\$ 0.4558
DTR faxes preliminary copy to SATO	GS7	0.2498	0.2498	0.2498	1	\$ 0.2498	\$ 0.2498	\$ 0.2498
SATO receives request for travel	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO gives copy of travel req to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS7	0.2498	0.2498	0.2498	12.5	\$ 3.1225	\$ 3.1225	\$ 3.1225
DTR takes orders to Department Head for signature	GS7	0.2498	0.2498	0.2498	2	\$ 0.4996	\$ 0.4996	\$ 0.4996
Department heads signs orders	AD00	0.7728	0.7728	0.7728	1	\$ 0.7728	\$ 0.7728	\$ 0.7728
DTR picks up signed orders	GS7	0.2498	0.2498	0.2498	1	\$ 0.2498	\$ 0.2498	\$ 0.2498
DTR makes copies	GS7	0.2498	0.2498	0.2498	3	\$ 0.7494	\$ 0.7494	\$ 0.7494
DTR takes orders to comptrollers	GS7	0.2498	0.2498	0.2498	7	\$ 1.7486	\$ 1.7486	\$ 1.7486
Edit clerk reviews orders for admin. check/funds avail	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	0.3498	0.4406	0.5408	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	0.1972	0.2268	0.2564	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
Edit clerk returns orders to Comptroller Travel Clerk	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	0.7384	0.7384	0.7384	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Department Travel Clerk picks up ticket	GS7	0.2498	0.2498	0.2498	20	\$ 4.9960	\$ 4.9960	\$ 4.9960
DTR gives traveler tickets/orders	GS7	0.2498	0.2498	0.2498	3.5	\$ 0.8743	\$ 0.8743	\$ 0.8743
					189	\$ 37.82	\$ 41.26	\$ 44.87
						\$ 54.09	\$ 59.01	\$ 64.16

With Benefits

Post Travel Cost For Code 013

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
Travel claim is typed	GS7	0.2498	0.2498	0.2498	12	\$ 2.9976	\$ 2.9976	\$ 2.9976
DTR takes signed claim to Comptroller Travel Clerk	GS7	0.2498	0.2498	0.2498	5	\$ 1.2490	\$ 1.2490	\$ 1.2490
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
					60.5	\$ 11.04	\$ 11.93	\$ 13.07
		With Benefits				\$ 15.79	\$ 17.06	\$ 18.69
		Totals				\$ 11.04	\$ 11.93	\$ 13.07
		Totals				\$ 15.79	\$ 17.06	\$ 18.69

Notes:
DTR does all the work for the traveler. Traveler just turns in travel orders and receipts to DTR, and DTR prepares smooth voucher.

Process

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Post Travel Cost For Code 02

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
Travel claim is copied	GS5	0.1857	0.1857	0.1857	2	\$ 0.3714	\$ 0.3714	\$ 0.3714
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
		Totals			45.5	\$ 7.17	\$ 8.05	\$ 9.20
		With Benefits				\$ 10.25	\$ 11.52	\$ 13.15

Notes:

Traveler is responsible for preparing their own voucher and taking it to the Comptroller, vice the DTR.

Pre-Travel Costs for Code 03

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
		Low	Medium	High		Low	Medium	High
DTR reviews forms	GS5/7/8/11	0.1592	0.2492	0.3794	9.3	\$ 1.4806	\$ 2.3176	\$ 3.5284
DTR computes and approves preliminary cost figures	GS5/7/8/11	0.1592	0.2492	0.3794	10	\$ 1.5920	\$ 2.4920	\$ 3.7940
SATO/Transportation gives quotes for estimates	E5/E6 GS5/6	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR takes forms to departmental accounting	GS5	0.1592	0.1831	0.2070	10	\$ 1.5920	\$ 1.8310	\$ 2.0700
Accounting approves preliminary cost figures	GS6/7	0.1775	0.2155	0.2564	7.5	\$ 1.3313	\$ 1.6159	\$ 1.9230
DTR takes forms to Curriculum Office for Dept. Sign. (students)	GS5/7	0.1592	0.2050	0.2564	4.8	\$ 0.7642	\$ 0.9840	\$ 1.2307
Curriculum office signs travel forms (students)	O5	0.2717	0.3752	0.4788	1	\$ 0.2717	\$ 0.3752	\$ 0.4788
DTR takes request to Dean of Students for signature (students)	GS5	0.1592	0.1831	0.2070	10	\$ 1.5920	\$ 1.8310	\$ 2.0700
Dean Of Students signs traveler request (students only)	O6	0.3397	0.4632	0.5868	1	\$ 0.3397	\$ 0.4632	\$ 0.5868
DTR faxes preliminary copy to SATO	GS5/7/8/11	0.1592	0.2492	0.3794	2.4	\$ 0.3821	\$ 0.5981	\$ 0.9106
SATO receives request for travel	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS5/7/8/11	0.1592	0.2492	0.3794	13.2	\$ 2.1014	\$ 3.2894	\$ 5.0081
DTR takes orders to Department Head/Funds Rep. for signature	GS5/7/8/11	0.1592	0.2492	0.3794	5.6	\$ 0.8915	\$ 1.3955	\$ 2.1246
Department head/Funds Rep. signs orders	O6/GS14	0.3397	0.51425	0.6391	1	\$ 0.3397	\$ 0.5143	\$ 0.6391
DTR picks up signed orders	GS5/7/8/11	0.1592	0.2492	0.3794	6.8	\$ 1.0826	\$ 1.6946	\$ 2.5799
DTR makes copies	GS5/7/8/11	0.1592	0.2492	0.3794	4.6	\$ 0.7323	\$ 1.1463	\$ 1.7452
DTR takes orders to Comptrollers	GS5/7/8/11	0.1592	0.2492	0.3794	11.9	\$ 1.8945	\$ 2.9655	\$ 4.5149
Edit clerk reviews orders for admin. check/funds avail	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	0.3498	0.4406	0.5408	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	0.1972	0.2268	0.2564	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
Edit clerk returns orders to Comptroller Travel Clerk	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	0.7384	0.7384	0.7384	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
DTR picks up ticket	GS5/8/11	0.1115	0.2567	0.3794	17	\$ 1.8955	\$ 4.3639	\$ 6.4498
DTR gives traveler tickets/orders	GS5/8/11	0.1115	0.2567	0.3794	1.1	\$ 0.1227	\$ 0.2824	\$ 0.4173
					231.2	\$ 36.87	\$ 60.01	\$ 65.47
					Totals	\$ 52.73	\$ 71.52	\$ 93.63
					With Benefits			

Post Travel Cost For Code03

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS5	0.1592	0.1831	0.2070	1.25	\$ 0.1990	\$ 0.2289	\$ 0.2588
Travel claim is typed/for reviewed and copied	GS5/7	0.1592	0.2050	0.2564	18.1	\$ 2.8815	\$ 3.7096	\$ 4.6408
DTR takes signed claim to Comptroller Travel Clerk	GS5/7	0.1592	0.2050	0.2564	9.7	\$ 1.5442	\$ 1.9880	\$ 2.4871
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
		Totals			72.55	\$ 11.42	\$ 13.61	\$ 16.21
		With Benefits				\$ 16.33	\$ 19.46	\$ 23.18

Notes:

In many cases, students are responsible for preparing their own claim and taking to Comptroller Travel clerk

Pre-Travel Costs for Code 04

Process	Rate of Task Performer	Step Time In Minutes	Cost Per Minute			Total Cost Per Minute		
			Low	Medium	High	Low	Medium	High
DTR reviews forms	GS5/7/9	12.3	0.1592	0.2291	0.3136	\$ 1.9582	\$ 2.8179	\$ 3.8573
DTR computes preliminary cost figures	GS5/7/9	11.7	0.1592	0.2291	0.3136	\$ 1.8626	\$ 2.6805	\$ 3.6691
SATO/Transportation gives quotes for estimates	E5/E6 GS5/6	4	0.1115	0.1706	0.2307	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR takes forms to departmental accounting	GS5/9	1	0.1592	0.2303	0.3136	\$ 0.1592	\$ 0.2303	\$ 0.3136
Accounting approves preliminary cost figures	GS9	10	0.2412	0.2774	\$0.31	\$ 2.4120	\$ 2.7740	\$ 3.1360
DTR faxes preliminary copy to SATO	GS5/7/9	1	0.1592	0.2291	0.3136	\$ 0.1592	\$ 0.2291	\$ 0.3136
SATO receives req. for travel	N/A	2	0	0	0	\$ -	\$ -	\$ -
SATO makes reservations	N/A	14.5	0	0	0	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	2	0	0	0	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	1	0	0	0	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS5/7/9	15	0.1592	0.2291	0.3136	\$ 2.3880	\$ 3.4365	\$ 4.7040
DTR takes orders to Department Head for signature	GS5/7/9	2.3	0.1592	0.2291	0.3136	\$ 0.3662	\$ 0.5269	\$ 0.7213
Department heads signs orders	O6/GS15		0.3397	0.6259	0.7517	\$ -	\$ -	\$ -
DTR picks up signed orders	GS5/7/9	2.3	0.1592	0.2291	0.3136	\$ 0.3662	\$ 0.5269	\$ 0.7213
DTR makes copies	GS7/9	2.5	0.1972	0.2521	0.3136	\$ 0.4930	\$ 0.6303	\$ 0.7840
DTR takes orders to comptrollers	GS5/7/9	4.3	0.1592	0.2291	0.3136	\$ 0.6846	\$ 0.9851	\$ 1.3485
Edit clerk reviews orders for admin. check/funds avail	GS7	12.5	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	15	0.3498	0.4406	0.5408	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	2	0.1972	0.2268	0.2564	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	12.5	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	2.5	0.1972	0.2268	0.2564	\$ 0.4930	\$ 0.5670	\$ 0.6410
Travel Clerk returns orders to Comptroller Travel Clerk	GS7	1	0.1972	0.2268	0.2564	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	12.5	0.1804	0.1804	0.1804	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	2	0.7384	0.7384	0.7384	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	7.5	0.1804	0.1804	0.1804	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	3	0	0	0	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	1	0	0	0	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	3	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	4	0	0	0	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	3	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921
DTR picks up ticket	GS9	5	0.2412	0.2774	0.3136	\$ 1.2060	\$ 1.3870	\$ 1.5680
DTR gives traveler tickets/orders	GS9	1	0.2412	0.2774	0.3136	\$ 0.2412	\$ 0.2774	\$ 0.3136
		181.4			Totals	\$ 30.76	\$ 43.99	\$ 54.85
			With Benefits		Totals	\$ 30.76	\$ 43.99	\$ 54.85
					Totals	\$ 30.76	\$ 43.99	\$ 54.85

Post Travel Cost For Code 04

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS5/7	0.1592	0.2050	0.2564	1	\$ 0.1592	\$ 0.2050	\$ 0.2564
Travel claim copied	GS5/9	0.1592	0.2303	0.3136	3.5	\$ 0.5572	\$ 0.8059	\$ 1.0976
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
					48	\$ 7.51	\$ 8.69	\$ 10.18
		With Benefits			Totals	\$ 10.74	\$ 12.43	\$ 14.55
					Totals			

Notes:

Traveler has the responsibilities of preparing claim and taking to the Comptroller Travel clerk.

Pre-Travel Costs for Code 05/05A

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
		Low	Medium	High		Low	Medium	High
DTR reviews forms	GS8	0.2257	0.2257	0.2257	3	\$ 0.6771	\$ 0.6771	\$ 0.6771
DTR computes preliminary cost figures	GS8	0.2257	0.2257	0.2257	3	\$ 0.6771	\$ 0.6771	\$ 0.6771
SATO/Transportation gives quotes for estimates	E5/6 GS5/6	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR faxes preliminary copy to SATO	GS8	0.2257	0.2257	0.2257	1	\$ 0.2257	\$ 0.2257	\$ 0.2257
SATO receives req. for travel	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS8	0.2257	0.2257	0.2257	5	\$ 1.1285	\$ 1.1285	\$ 1.1285
DTR takes orders to Department Head for signature	GS8	0.2257	0.2257	0.2257	2	\$ 0.4514	\$ 0.4514	\$ 0.4514
Department heads signs orders	AD00	0.9128	0.9128	0.9128	1	\$ 0.9128	\$ 0.9128	\$ 0.9128
DTR picks up signed orders	GS8	0.2257	0.2257	0.2257	1	\$ 0.2257	\$ 0.2257	\$ 0.2257
DTR makes copies	GS8	0.2257	0.2257	0.2257	1	\$ 0.2257	\$ 0.2257	\$ 0.2257
DTR takes orders to comptrollers	GS8	0.2257	0.2257	0.2257	5	\$ 1.1285	\$ 1.1285	\$ 1.1285
Edit clerk reviews orders for admin. check/funds avail	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	0.3498	0.4406	0.5408	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	0.1972	0.2268	0.2564	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
Edit clerk returns orders to Comptroller Travel Clerk	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	0.7384	0.7384	0.7384	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Department Travel Clerk picks up ticket	GS8	0.2257	0.2257	0.2257	10	\$ 2.2570	\$ 2.2570	\$ 2.2570
DTR gives traveler tickets/orders	GS8	0.2257	0.2257	0.2257	1	\$ 0.2257	\$ 0.2257	\$ 0.2257
					147	\$ 26.80	\$ 29.99	\$ 33.54
					Totals	\$ 38.04	\$ 42.88	\$ 47.96
					Totals	\$ 38.04	\$ 42.88	\$ 47.96

With Benefits

Post Travel Cost For Code 05/05A

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR completes travel claim and attaches receipts	GS8	0.2257	0.2257	0.2257	10	\$ 2.26	\$ 2.26	\$ 2.26
DTR takes signed claim to Comptroller Travel Clerk	GS8	0.2257	0.2257	0.2257	10	\$ 2.26	\$ 2.26	\$ 2.26
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.26	\$ 2.26	\$ 2.26
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.35	\$ 1.35	\$ 1.35
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.20	\$ 0.23	\$ 0.26
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.49	\$ 0.57	\$ 0.64
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.56	\$ 0.80	\$ 1.15
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.56	\$ 0.80	\$ 1.15
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.64	\$ 0.79	\$ 0.95
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.11	\$ 0.16	\$ 0.23
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.48	\$ 0.55	\$ 0.62
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.16	\$ 0.18	\$ 0.21
					63.5	\$ 11.31	\$ 12.20	\$ 13.34
						\$ 16.17	\$ 17.44	\$ 19.07
		With Benefits			Totals			
					Totals			

Pre-Travel Costs for 06 Curriculumlums

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
		Low	Medium	High		Low	Medium	High
DTR reviews forms	GS5/7	0.1592	0.2050	0.2564	11.25	\$ 1.7910	\$ 2.3063	\$ 2.8845
DTR computes preliminary cost figures	GS5/7/9	0.1592	0.2428	0.3136	11.25	\$ 1.7910	\$ 2.7315	\$ 3.5280
SATO/Transportation gives quotes for estimates	E5/E6 GS5/6	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR takes forms to departmental accounting	GS5/7	0.1592	0.205	0.2564	5.5	\$ 0.8756	\$ 1.1275	\$ 1.4102
Accounting approves preliminary cost figures	GS6/7	0.1775	0.2155	0.2564	7.5	\$ 1.3313	\$ 1.6159	\$ 1.9230
DTR faxes preliminary copy to SATO	GS5/7/9	0.1592	0.2428	0.3136	2	\$ 0.3184	\$ 0.4856	\$ 0.6272
SATO receives request for travel	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO gives copy of travel req to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS5/7/9	0.1592	0.2428	0.3136	13.75	\$ 2.1890	\$ 3.3385	\$ 4.3120
DTR takes orders to Department Head for signature	GS5/7/9	0.1592	0.2428	0.3136	10	\$ 1.5920	\$ 2.4280	\$ 3.1360
Department heads signs orders	O6/AD00	0.3397	0.6880	0.9128	3.9	\$ 1.3248	\$ 2.6832	\$ 3.5599
DTR picks up signed orders	GS5/7/9	0.1592	0.2428	0.3136	4	\$ 0.6368	\$ 0.9712	\$ 1.2544
DTR makes copies	GS5/7/9	0.1592	0.2428	0.3136	11.25	\$ 1.7910	\$ 2.7315	\$ 3.5280
DTR takes orders to comptrollers	GS5/7/9	0.1592	0.2428	0.3136	12.5	\$ 1.9900	\$ 3.0350	\$ 3.9200
Edit clerk reviews orders for admin. check/funds avail	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	0.3498	0.4406	0.5408	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	0.1972	0.2268	0.2564	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
Edit clerk returns orders to Comptroller Travel Clerk	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	0.7384	0.7384	0.7384	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Department Travel Clerk picks up ticket	GS5/7/9	0.1592	0.2428	0.3136	22.5	\$ 3.5820	\$ 5.4630	\$ 7.0560
DTR gives traveler tickets/orders	GS5/7/9	0.1592	0.2428	0.3136	2	\$ 0.3184	\$ 0.4856	\$ 0.6272
					231.4	\$ 38.00	\$ 51.26	\$ 63.17
						\$ 54.34	\$ 73.30	\$ 90.33

With Benefits

Totals

Post Travel Cost For 06 Curriculumms

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS5/7	0.1592	0.2050	0.2564	2	\$ 0.3184	\$ 0.4100	\$ 0.5128
Travel claim is typed	GS5/7/9	0.1592	0.2428	0.3136	10	\$ 1.5920	\$ 2.4280	\$ 3.1360
DTR takes signed claim to Comptroller Travel Clerk	GS5/7/9	0.1592	0.2428	0.3136	8.5	\$ 1.3532	\$ 2.0638	\$ 2.6656
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
					64	\$ 10.06	\$ 12.58	\$ 15.14
						\$ 14.39	\$ 18.00	\$ 21.65
		With Benefits			Totals			
					Totals			

Pre-Travel Costs for 07 Curriculums

Rate of Task		Process	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
Performer	Low		Medium	High	Low		Medium	High	
GS5/6/7/9	DTR reviews forms	DTR computes preliminary cost figures SATO/Transportation gives quotes for estimates DTR faxes preliminary copy to SATO SATO receives request for travel SATO makes reservations SATO faxes copy of item to DTR SATO gives copy of travel req to Transportation Transp. files request until orders are received from Comptroller DTR types orders DTR takes orders to Department Head for signature Department heads signs orders DTR picks up signed orders DTR makes copies DTR takes orders to comptrollers Edit clerk reviews orders for admin. check/funds avail Supervisor reviews orders/Signs Edit Clerks finalizes review Transmittal is completed Copy to analyst for obligation Edit clerk returns orders to Comptroller Travel Clerk reviews orders Comptroller signs orders Comptroller travel clerk breaks down/delivers to Transportation Transportation receives orders Transportation gives orders to SATO SATO inputs accounting data SATO gives orders back to Transportation Transportation Quality Control record and OK's it to be ticketed Transportation files packet in SATO's log book SATO cuts ticket Transportation signs for ticket Transportation logs ticket in transportation log book Transportation files ticket and orders by date of travel Department Travel Clerk picks up ticket DTR gives traveler tickets/orders	0.1592	0.2229	0.3136	\$ 0.3502	\$ 0.4904	\$ 0.6899	
GS5/6/7/9	DTR computes preliminary cost figures		0.1592	0.2229	0.3136	\$ 1.2895	\$ 1.8055	\$ 2.5402	
E5/E6 GS5/6	SATO/Transportation gives quotes for estimates		0.1115	0.1706	0.2307	\$ 0.4460	\$ 0.6824	\$ 0.9228	
GS5/6/7/9	DTR faxes preliminary copy to SATO		0.1592	0.2229	0.3136	\$ 0.4298	\$ 0.6018	\$ 0.8467	
N/A	SATO receives request for travel		0	0	0	\$ -	\$ -	\$ -	
N/A	SATO makes reservations		0	0	0	\$ -	\$ -	\$ -	
N/A	SATO faxes copy of item to DTR		0	0	0	\$ -	\$ -	\$ -	
N/A	SATO gives copy of travel req to Transportation		0	0	0	\$ -	\$ -	\$ -	
E5/6 GS5/6	Transp. files request until orders are received from Comptroller		0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614	
GS5/6/7/9	DTR types orders		0.1592	0.2229	0.3136	\$ 1.7353	\$ 2.4296	\$ 3.4182	
GS5/6/7/9	DTR takes orders to Department Head for signature	0.1592	0.2229	0.3136	\$ 0.5572	\$ 0.7802	\$ 1.0976		
AD00	Department heads signs orders	0.7295	0.8355	0.9026	\$ 3.1369	\$ 3.5927	\$ 3.8812		
GS5/6/7/9	DTR picks up signed orders	0.1592	0.2229	0.3136	\$ 0.3821	\$ 0.5350	\$ 0.7526		
GS5/6/7/9	DTR makes copies	0.1592	0.2229	0.3136	\$ 0.7323	\$ 1.0253	\$ 1.4426		
GS5/6/7/9	DTR takes orders to comptrollers	0.1592	0.2229	0.3136	\$ 2.2288	\$ 3.1206	\$ 4.3904		
GS7	Edit clerk reviews orders for admin. check/funds avail	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050		
GS12/13	Supervisor reviews orders/Signs	0.3498	0.4406	0.5408	\$ 5.2470	\$ 6.6090	\$ 8.1120		
GS7	Edit Clerks finalizes review	0.1972	0.2268	0.2564	\$ 0.3944	\$ 0.4536	\$ 0.5128		
GS7	Transmittal is completed	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050		
GS7	Copy to analyst for obligation	0.1972	0.2268	0.2564	\$ 0.4930	\$ 0.5670	\$ 0.6410		
GS7	Edit clerk returns orders to Comptroller	0.1972	0.2268	0.2564	\$ 0.1972	\$ 0.2268	\$ 0.2564		
GS4	Travel Clerk reviews orders	0.1804	0.1804	0.1804	\$ 2.2554	\$ 2.2554	\$ 2.2554		
GS15	Comptroller signs orders	0.7384	0.7384	0.7384	\$ 1.4769	\$ 1.4769	\$ 1.4769		
GS4	Comptroller travel clerk breaks down/delivers to Transportation	0.1804	0.1804	0.1804	\$ 1.3532	\$ 1.3532	\$ 1.3532		
E5/6 GS5/6	Transportation receives orders	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614		
E5/6 GS5/6	Transportation gives orders to SATO	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307		
N/A	SATO inputs accounting data	0	0	0	\$ -	\$ -	\$ -		
N/A	SATO gives orders back to Transportation	0	0	0	\$ -	\$ -	\$ -		
E5/6 GS5/6	Transportation Quality Control record and OK's it to be ticketed	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921		
E5/6 GS5/6	Transportation files packet in SATO's log book	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307		
N/A	SATO cuts ticket	0	0	0	\$ -	\$ -	\$ -		
E5/6 GS5/6	Transportation signs for ticket	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307		
E5/6 GS5/6	Transportation logs ticket in transportation log book	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614		
E5/6 GS5/6	Transportation files ticket and orders by date of travel	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921		
GS5/6/7/9	Department Travel Clerk picks up ticket	0.1592	0.2229	0.3136	\$ 2.4676	\$ 3.4550	\$ 4.8608		
GS5/6/7/9	DTR gives traveler tickets/orders	0.1592	0.2229	0.3136	\$ 0.4298	\$ 0.6018	\$ 0.8467		
With Benefits			Totals			\$ 32.21	\$ 40.29	\$ 50.17	
			Totals			\$ 46.05	\$ 57.62	\$ 71.74	

Process

With Benefits

Pre-Travel Costs for 08 Curriculums

Rate of Task		Process	Step Time In Minutes	Cost Per Minute			Total Cost Per Minute		
Performer	Low			Medium	High	Low	Medium	High	
DTR reviews forms	GS5/6	DTR reviews forms	5.4	0.1592	0.1936	0.2307	\$ 0.8597	\$ 1.0454	\$ 1.2458
DTR computes preliminary cost figures	GS5/6	DTR computes preliminary cost figures	7.4	0.1592	0.1936	0.2307	\$ 1.1781	\$ 1.4326	\$ 1.7072
SATO/Transportation gives quotes for estimates	E5/E6 GS5/6	SATO/Transportation gives quotes for estimates	4	0.1115	0.1706	0.2307	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR takes forms to departmental accounting	GS5/6	DTR takes forms to departmental accounting	1	0.1592	0.1936	0.2307	\$ 0.1592	\$ 0.1936	\$ 0.2307
Accounting approves preliminary cost figures	GS7	Accounting approves preliminary cost figures	4.8	0.1972	0.2268	0.2564	\$ 0.9466	\$ 1.0886	\$ 1.2307
DTR faxes preliminary copy to SATO	GS5/6	DTR faxes preliminary copy to SATO	2.8	0.1592	0.1936	0.2307	\$ 0.4458	\$ 0.5421	\$ 0.6460
SATO receives request for travel	N/A	SATO makes reservations	2	0	0	0	\$ -	\$ -	\$ -
SATO makes reservations	N/A	SATO faxes copy of item to DTR	14.5	0	0	0	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	SATO gives copy of travel req to Transportation	2	0	0	0	\$ -	\$ -	\$ -
SATO gives copy of travel req to Transportation	N/A	Transp. files request until orders are received from Comptroller	1	0	0	0	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	DTR types orders	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS5/6	DTR takes orders to Department Head for signature	7.3	0.1592	0.1936	0.2307	\$ 1.1622	\$ 1.4133	\$ 1.6841
DTR takes orders to Department Head for signature	GS5/6	Department heads signs orders	3.9	0.1592	0.1936	0.2307	\$ 0.6209	\$ 0.7550	\$ 0.8997
Department heads signs orders	AD00	DTR picks up signed orders	4.5	0.6104	0.7853	0.9128	\$ 2.7468	\$ 3.5339	\$ 4.1076
DTR picks up signed orders	GS5/6	DTR makes copies	5.3	0.1592	0.1936	0.2307	\$ 0.8438	\$ 1.0261	\$ 1.2227
DTR makes copies	GS5/6	DTR takes orders to comptrollers	1.9	0.1592	0.1936	0.2307	\$ 0.3025	\$ 0.3678	\$ 0.4383
DTR takes orders to comptrollers	GS5/6	Edit clerk reviews orders for admin. check/funds avail	8.3	0.1592	0.1936	0.2307	\$ 1.3214	\$ 1.6069	\$ 1.9148
Edit clerk reviews orders for admin. check/funds avail	GS7	Supervisor reviews orders/Signs	12.5	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	Edit Clerks finalizes review	15	0.3498	0.4406	0.5408	\$ 5.2470	\$ 6.6090	\$ 8.1120
Edit Clerks finalizes review	GS7	Transmittal is completed	2	0.1972	0.2268	0.2564	\$ 0.3944	\$ 0.4536	\$ 0.5128
Transmittal is completed	GS7	Copy to analyst for obligation	12.5	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050
Copy to analyst for obligation	GS7	Edit clerk returns orders to Comptroller Travel Clerk	2.5	0.1972	0.2268	0.2564	\$ 0.4930	\$ 0.5670	\$ 0.6410
Edit clerk returns orders to Comptroller Travel Clerk	GS7	Travel Clerk reviews orders	1	0.1972	0.2268	0.2564	\$ 0.1972	\$ 0.2268	\$ 0.2564
Travel Clerk reviews orders	GS4	Comptroller signs orders	12.5	0.1804	0.1804	0.1804	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller signs orders	GM15	Comptroller travel clerk breaks down/delivers to Transportation	2	0.7384	0.7384	0.7384	\$ 1.4769	\$ 1.4769	\$ 1.4769
Comptroller travel clerk breaks down/delivers to Transportation	GS4	Transportation receives orders	7.5	0.1804	0.1804	0.1804	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation receives orders	E5/6 GS5/6	Transportation gives orders to SATO	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation gives orders to SATO	E5/6 GS5/6	SATO inputs accounting data	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO inputs accounting data	N/A	SATO gives orders back to Transportation	3	0	0	0	\$ -	\$ -	\$ -
SATO gives orders back to Transportation	N/A	Transportation Quality Control record and OK's it to be ticketed	1	0	0	0	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	Transportation files packet in SATO's log book	3	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	SATO cuts ticket	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	Transportation signs for ticket	4	0	0	0	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	Transportation logs ticket in transportation log book	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	Transportation files ticket and orders by date of travel	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	Department Travel Clerk picks up ticket	3	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921
Department Travel Clerk picks up ticket	GS5/6	DTR gives traveler tickets/orders	13.1	0.1592	0.1936	0.2307	\$ 2.0855	\$ 2.5362	\$ 3.0222
DTR gives traveler tickets/orders	GS5/6		2	0.1592	0.1936	0.2307	\$ 0.3184	\$ 0.3872	\$ 0.4614
			181.7	Totals	Totals	Totals	\$ 31.46	\$ 37.78	\$ 44.21
				With Benefits	Totals	Totals	\$ 44.98	\$ 54.03	\$ 63.22

Post Travel Cost For 08 Curriculums

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler travel claim worksheet	GS5/6	0.1592	0.1936	0.2041	2.6	\$ 0.4139	\$ 0.5034	\$ 0.5307
Travel claim is typed/copied	GS5/6/9	0.1592	0.2215	0.3136	11.9	\$ 1.8945	\$ 2.6362	\$ 3.7318
DTR takes signed claim to Comptroller Travel Clerk	GS5/6/9	0.1592	0.2215	0.3136	6.6	\$ 1.0507	\$ 1.4621	\$ 2.0698
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS-5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
					64.6	\$ 10.16	\$ 12.28	\$ 15.16
						\$ 14.52	\$ 17.57	\$ 21.67
		With Benefits			Totals	\$ 10.16	\$ 12.28	\$ 15.16
					Totals	\$ 14.52	\$ 17.57	\$ 21.67

Pre-Travel Costs for Code 09

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Minute		
		Low	Medium	High		Low	Medium	High
DTR reviews forms	GS7	0.2366	0.2366	0.2366	3	\$ 0.7098	\$ 0.7098	\$ 0.7098
DTR computes preliminary cost figures/budgets travel expense	GS7	0.2366	0.2366	0.2366	15	\$ 3.5490	\$ 3.5490	\$ 3.5490
SATO/Transportation gives quotes for estimates	E5/6 GS5/6	0.1115	0.1706	0.2307	4	\$ 0.4460	\$ 0.6824	\$ 0.9228
DTR faxes preliminary copy to SATO	GS7	0.2366	0.2366	0.2366	3	\$ 0.7098	\$ 0.7098	\$ 0.7098
SATO receives req. for travel	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO faxes copy of item to DTR	N/A	0	0	0	2	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transp. files request until orders are received from Comptroller	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR types orders	GS7	0.2366	0.2366	0.2366	10	\$ 2.3660	\$ 2.3660	\$ 2.3660
DTR takes request to Provost/for Department Chair for signature	GS7	0.2366	0.2366	0.2366	2	\$ 0.4732	\$ 0.4732	\$ 0.4732
Provost/Dept. Chair signs travel request	AD00	0.9128	0.9128	0.9128	5	\$ 4.5640	\$ 4.5640	\$ 4.5640
DTR picks up signed orders	GS7	0.2366	0.2366	0.2366	1	\$ 0.2366	\$ 0.2366	\$ 0.2366
DTR makes copies	GS7	0.2366	0.2366	0.2366	5	\$ 1.1830	\$ 1.1830	\$ 1.1830
DTR takes orders to comptrollers	GS7	0.2366	0.2366	0.2366	5	\$ 1.1830	\$ 1.1830	\$ 1.1830
Edit clerk reviews orders for admin. check/funds avail	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Supervisor reviews orders/Signs	GS12/13	0.3498	0.4406	0.5408	15	\$ 5.2470	\$ 6.6090	\$ 8.1120
Transmittal is completed	GS7	0.1972	0.2268	0.2564	2	\$ 0.3944	\$ 0.4536	\$ 0.5128
Copy to analyst for obligation	GS7	0.1972	0.2268	0.2564	12.5	\$ 2.4650	\$ 2.8350	\$ 3.2050
Edit clerk returns orders to Comptroller Travel Clerk	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
Travel Clerk reviews orders	GS4	0.1804	0.1804	0.1804	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Comptroller signs orders	GM15	0.7384	0.7384	0.7384	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Comptroller travel clerk breaks down/delivers to Transportation	GS4	0.1804	0.1804	0.1804	2	\$ 1.4769	\$ 1.4769	\$ 1.4769
Transportation receives orders	E5/6 GS5/6	0.1115	0.1706	0.2307	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Transportation gives orders to SATO	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
SATO inputs accounting data	N/A	0	0	0	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO gives orders back to Transportation	N/A	0	0	0	3	\$ -	\$ -	\$ -
Transportation Quality Control record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in transportation log book	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Department Travel Clerk picks up ticket	GS7	0.2366	0.2366	0.2366	15	\$ 3.5490	\$ 3.5490	\$ 3.5490
DTR gives traveler tickets/orders	GS7	0.2366	0.2366	0.2366	3	\$ 0.7098	\$ 0.7098	\$ 0.7098
					181	\$ 37.70	\$ 41.09	\$ 44.63
						\$ 53.91	\$ 58.75	\$ 63.83
With Benefits								
Totals								

Post Travel Cost For Code 09

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
Travel claim is typed	GS7	0.2366	0.2366	0.2366	15	\$ 3.5490	\$ 3.5490	\$ 3.5490
DTR makes copies of all paperwork	GS7	0.2366	0.2366	0.2366	10	\$ 2.3660	\$ 2.3660	\$ 2.3660
DTR takes signed claim to Comptroller Travel Clerk	GS7	0.2366	0.2366	0.2366	10	\$ 2.3660	\$ 2.3660	\$ 2.3660
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
		Totals			78.5	\$15.08	\$15.96	\$17.10
		With Benefits				\$21.56	\$22.83	\$24.46

Rate of Task Performer	Process	Step Time In Minutes	Cost Per Minute			Total Cost Per Minute		
			Low	Medium	High	Low	Medium	High
GS7	DTR reviews forms	1	0.2169	0.2169	0.2169	\$ 0.2169	\$ 0.2169	\$ 0.2169
GS7	DTR computes preliminary cost figures	1	0.2169	0.2169	0.2169	\$ 0.2169	\$ 0.2169	\$ 0.2169
E5/6 GS5/6	SATO/Transportation gives quotes for estimates	4	0.1115	0.1706	0.2307	\$ 0.4460	\$ 0.6824	\$ 0.9228
GS7	DTR faxes preliminary copy to SATO /	1	0.2169	0.2169	0.2169	\$ 0.2169	\$ 0.2169	\$ 0.2169
N/A	SATO receives req. for travel	2	0	0	0	\$ -	\$ -	\$ -
N/A	SATO makes reservations	14.5	0	0	0	\$ -	\$ -	\$ -
N/A	SATO faxes copy of item to DTR	2	0	0	0	\$ -	\$ -	\$ -
N/A	SATO gives copy of travel request to Transportation	1	0	0	0	\$ -	\$ -	\$ -
E5/6 GS5/6	Transp. files request until orders are received from Comptroller	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
GS7	DTR types orders	10	0.2169	0.2169	0.2169	\$ 2.1690	\$ 2.1690	\$ 2.1690
GS7	DTR takes orders to Department Head for signature	1	0.2169	0.2169	0.2169	\$ 0.2169	\$ 0.2169	\$ 0.2169
O5	Department heads signs orders	1	0.2717	0.3752	0.4788	\$ 0.2717	\$ 0.3752	\$ -
GS7	DTR makes copies	1	0.2169	0.2169	0.2169	\$ 0.2169	\$ 0.2169	\$ 0.2169
GS7	DTR takes orders to comptrollers	10	0.2169	0.2169	0.2169	\$ 2.1690	\$ 2.1690	\$ 2.1690
GS7	Edit clerk reviews orders for admin. check/funds avail	12.5	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050
GS12/13	Supervisor reviews orders/Signs	15	0.3498	0.4406	0.5408	\$ 5.2470	\$ 6.6090	\$ 8.1120
GS7	Edit Clerks finalizes review	2	0.1972	0.2268	0.2564	\$ 0.3944	\$ 0.4536	\$ 0.5128
GS7	Transmittal is completed	12.5	0.1972	0.2268	0.2564	\$ 2.4650	\$ 2.8350	\$ 3.2050
GS7	Copy to analyst for obligation	2.5	0.1972	0.2268	0.2564	\$ 0.4930	\$ 0.5670	\$ 0.6410
GS7	Edit clerk returns orders to Comptroller Travel Clerk	1	0.1972	0.2268	0.2564	\$ 0.1972	\$ 0.2268	\$ 0.2564
GS4	Travel Clerk reviews orders	12.5	0.1804	0.1804	0.1804	\$ 2.2554	\$ 2.2554	\$ 2.2554
GM15	Comptroller signs orders	2	0.7384	0.7384	0.7384	\$ 1.4769	\$ 1.4769	\$ 1.4769
GS4	Comptroller travel clerk breaks down/delivers to Transportation	7.5	0.1804	0.1804	0.1804	\$ 1.3532	\$ 1.3532	\$ 1.3532
E5/6 GS5/6	Transportation receives orders	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
E5/6 GS5/6	Transportation gives orders to SATO	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
N/A	SATO inputs accounting data	3	0	0	0	\$ -	\$ -	\$ -
N/A	SATO gives orders back to Transportation	1	0	0	0	\$ -	\$ -	\$ -
E5/6 GS5/6	Transportation Quality Control record and OK's it to be ticketed	3	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921
E5/6 GS5/6	Transportation files packet in SATO's log book	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
N/A	SATO cuts ticket	4	0	0	0	\$ -	\$ -	\$ -
E5/6 GS5/6	Transportation signs for ticket	1	0.1115	0.1706	0.2307	\$ 0.1115	\$ 0.1706	\$ 0.2307
E5/6 GS5/6	Transportation logs ticket in transportation log book	2	0.1115	0.1706	0.2307	\$ 0.2230	\$ 0.3412	\$ 0.4614
E5/6 GS5/6	Transportation files ticket and orders by date of travel	3	0.1115	0.1706	0.2307	\$ 0.3345	\$ 0.5118	\$ 0.6921
GS7	Department Travel Clerk picks up ticket	10	0.2169	0.2169	0.2169	\$ 2.1690	\$ 2.1690	\$ 2.1690
GS7	DTR gives traveler tickets/orders	1	0.2169	0.2169	0.2169	\$ 0.2169	\$ 0.2169	\$ 0.2169
With Benefits			\$ 26.55	\$ 37.96	\$ 47.49	\$ 30.04	\$ 42.95	\$ 53.21
Totals			\$ 26.55	\$ 37.96	\$ 47.49	\$ 30.04	\$ 42.95	\$ 53.21

Post Travel Cost For Code 10

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
Travel claim is typed	GS7	0.2169	0.2169	0.2169	10	\$ 2.1690	\$ 2.1690	\$ 2.1690
DTR takes signed claim to Comptroller Travel Clerk	GS7	0.2169	0.2169	0.2169	10	\$ 2.1690	\$ 2.1690	\$ 2.1690
Travel clerk reviews claim and prepares transmittal form	GS4	0.1804	0.1804	0.1804	12.5	\$ 2.2554	\$ 2.2554	\$ 2.2554
Travel clerk delivers claim and transmittal forms to PSD	GS4	0.1804	0.1804	0.1804	7.5	\$ 1.3532	\$ 1.3532	\$ 1.3532
Edit clerk receives copy of travel claim and GTR	GS7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
Edit clerk distributes to analysts for entry	GS7	0.1972	0.2268	0.2564	2.5	\$ 0.4930	\$ 0.5670	\$ 0.6410
PSD reviews claim	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
PSD enters claim into computer	E5/E6/GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Clerk audits claim	E6	0.127	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
PSD clerk hands completed claim to checkwriter	E5/E6/GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Checkwriter prepares payment for traveler	GS5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
	Totals			Totals	63.5	\$ 11.14	\$ 12.02	\$ 13.16
	With Benefits			Totals		\$ 15.92	\$ 17.19	\$ 18.82

APPENDIX C: TMP TRAVEL DATA SHEETS

Pre-Travel Costs for SM using TMP

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR reviews forms	GS-5	0.1592	0.1592	0.1592	5	\$ 0.7960	\$ 0.7960	\$ 0.7960
DTR inputs travel data into TMP	GS-5	0.1592	0.1592	0.1592	9	\$ 1.4329	\$ 1.4329	\$ 1.4329
DTR electronically signs document	GS-5	0.1592	0.1592	0.1592	0.5	\$ 0.0796	\$ 0.0796	\$ 0.0796
DTR electronically send document to SATO	GS-5	0.1592	0.1592	0.1592	0.5	\$ 0.0796	\$ 0.0796	\$ 0.0796
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
SATO inputs reservation data into TMP	N/A	0	0	0	2	\$ -	\$ -	\$ -
Transportation files travel request and holds	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR reviews data for correctness	GS-5	0.1592	0.1592	0.1592	2	\$ 0.3184	\$ 0.3184	\$ 0.3184
DTR electronically signs document	GS-5	0.1592	0.1592	0.1592	2	\$ 0.3184	\$ 0.3184	\$ 0.3184
Acct. Technician reviews and electronically signs/sends	GS-6	0.1775	0.1775	0.1775	10	\$ 1.7746	\$ 1.7746	\$ 1.7746
Department Chair reviews and electronically signs/sends	AD00	0.9128	0.9128	0.9128	5	\$ 4.5640	\$ 4.5640	\$ 4.5640
Comptroller Edit Clerk prints copy from TMP	GS-7	0.1972	0.2268	0.2564	4	\$ 0.7888	\$ 0.9072	\$ 1.0256
Edit clerk obligates funds/electronically signs	GS-7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
SATO inputs the accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation QC record and Ok's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in Transportation Log Book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR picks up ticket	GS-5	0.1592	0.1592	0.1592	5	\$ 0.7960	\$ 0.7960	\$ 0.7960
DTR delivers ticket to traveler	GS-5	0.1592	0.1592	0.1592	2	\$ 0.3184	\$ 0.3184	\$ 0.3184
				Totals	81.5	\$ 12.58	\$ 13.32	\$ 14.07
				Totals		\$ 17.99	\$ 19.04	\$ 20.12
		With Benefits						

Post-Travel Costs for SM using TMP

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler a claim worksheet	GS-5	0.1592	0.1592	0.1592	1	\$ 0.1592	\$ 0.1592	\$ 0.1592
DTR inputs information into TMP	GS-5	0.1592	0.1592	0.1592	10	\$ 1.5921	\$ 1.5921	\$ 1.5921
DTR calls traveler to come verify information	GS-5	0.1592	0.1592	0.1592	5	\$ 0.7960	\$ 0.7960	\$ 0.7960
DTR/Traveler reviews claim information	GS-5	0.1592	0.1592	0.1592	5	\$ 0.7960	\$ 0.7960	\$ 0.7960
Claim is electronically signed and sent	GS-5	0.1592	0.1592	0.1592	0.5	\$ 0.0796	\$ 0.0796	\$ 0.0796
Acct. Tech reviews and electronically signs/sends	GS-6	0.1775	0.1775	0.1775	10	\$ 1.7746	\$ 1.7746	\$ 1.7746
Department Chair reviews and signs/sends	AD00	0.91280	0.91280	0.91280	5	\$ 4.5640	\$ 4.5640	\$ 4.5640
Comptroller Edit Clerk prints copy from TMP	GS-7	0.1972	0.2268	0.2564	4	\$ 0.7888	\$ 0.9072	\$ 1.0256
Edit clerk obligates funds/electronically signs	GS-7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
PSD reviews claim	E5/6 GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Enters claim into computer	E5/6 GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
Hands completed claim to check writer	GS-5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Check writer prepares payment for traveler	GS-5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS-5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
DTR delivers original documents back to Traveler	GS-5	0.1592	0.1592	0.1592	2	\$ 0.3184	\$ 0.3184	\$ 0.3184
					63.5	\$ 13.56	\$ 14.49	\$ 15.68
					Totals	\$ 19.40	\$ 20.73	\$ 22.42
		With Benefits						
					Totals			

Process

With Benefits

Post-Travel Costs for ME using TMP

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
DTR gives traveler a claim worksheet	GS-5	0.1857	0.1857	0.1857	1	\$ 0.1857	\$ 0.1857	\$ 0.1857
DTR inputs information into TMP	GS-5	0.1857	0.1857	0.1857	17.5	\$ 3.2504	\$ 3.2504	\$ 3.2504
DTR calls traveler to come verify information	GS-5	0.1857	0.1857	0.1857	1	\$ 0.1857	\$ 0.1857	\$ 0.1857
DTR/Traveler reviews claim information	GS-5	0.1857	0.1857	0.1857	5	\$ 0.9287	\$ 0.9287	\$ 0.9287
Claim is electronically signed and sent	GS-5	0.1857	0.1857	0.1857	0.5	\$ 0.0929	\$ 0.0929	\$ 0.0929
Department Chair reviews and signs/sends	AD00	0.8485	0.8485	0.8485	5	\$ 4.2427	\$ 4.2427	\$ 4.2427
Comptroller Edit Clerk prints copy from TMP	GS-7	0.1972	0.2268	0.2564	4	\$ 0.7888	\$ 0.9072	\$ 1.0256
Edit clerk obligates funds/electronically signs	GS-7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
PSD reviews claim	E5/6 GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Enters claim into computer	E5/6 GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
Hands completed claim to check writer	GS-5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Check writer prepares payment for traveler	GS-5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS-5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
DTR delivers original documents back to Traveler	GS-5	0.1857	0.1857	0.1857	1	\$ 0.1857	\$ 0.1857	\$ 0.1857
				Totals	56	\$ 12.56	\$ 13.49	\$ 14.67
				Totals		\$ 17.96	\$ 19.29	\$ 20.98
				With Benefits				

Pre-Travel Costs for EC using TMP

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
SATO makes reservations	N/A	0	0	0	14.5	\$ -	\$ -	\$ -
SATO gives copy of travel request to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
SATO inputs reservation data into TMP	N/A	0	0	0	2	\$ -	\$ -	\$ -
Transportation files travel request and holds	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
DTR/Traveler reviews data for correctness	GS8	0.2402	0.2402	0.2402	9.5	\$ 2.2819	\$ 2.2819	\$ 2.2819
DTR/Traveler electronically signs document	GS8	0.2402	0.2402	0.2402	0.5	\$ 0.1201	\$ 0.1201	\$ 0.1201
Acct. Technician reviews and electronically signs/sends	GS7/8	0.1972	0.2390	0.2840	10	\$ 1.9720	\$ 2.3900	\$ 2.8400
Department Chair reviews and electronically signs/sends	AD00	0.8485	0.8485	0.8485	5	\$ 4.2427	\$ 4.2427	\$ 4.2427
Comptroller Edit Clerk prints copy from TMP	GS-7	0.1972	0.2268	0.2564	4	\$ 0.7888	\$ 0.9072	\$ 1.0256
Edit clerk obligates funds/electronically signs	GS-7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
SATO inputs the accounting data	N/A	0	0	0	3	\$ -	\$ -	\$ -
SATO gives orders to Transportation	N/A	0	0	0	1	\$ -	\$ -	\$ -
Transportation QC record and OK's it to be ticketed	E5/6 GS5/6	0.1115	0.1706	0.2307	3	\$ 0.3345	\$ 0.5118	\$ 0.6921
Transportation files packet in SATO's log book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
SATO cuts ticket	N/A	0	0	0	4	\$ -	\$ -	\$ -
Transportation signs for ticket	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation logs ticket in Transportation Log Book	E5/6 GS5/6	0.1115	0.1706	0.2307	1	\$ 0.1115	\$ 0.1706	\$ 0.2307
Transportation files ticket and orders by date of travel	E5/6 GS5/6	0.1115	0.1706	0.2307	2	\$ 0.2230	\$ 0.3412	\$ 0.4614
				Totals	65.6	\$ 10.72	\$ 11.87	\$ 13.07
		With Benefits		Totals		\$ 15.33	\$ 16.98	\$ 18.70

Post-Travel Costs for EC using TMP

Process	Rate of Task Performer	Cost Per Minute			Step Time In Minutes	Total Cost Per Step		
		Low	Medium	High		Low	Medium	High
Acct. Tech reviews and electronically signs/sends	GS7/8	0.1972	0.2390	0.284	10	\$ 1.9720	\$ 2.3900	\$ 2.8400
Department Chair reviews and signs/sends	AD00	0.8418	0.8418	0.8418	5	\$ 4.2089	\$ 4.2089	\$ 4.2089
Comptroller Edit Clerk prints copy from TMP	GS-7	0.1972	0.2268	0.2564	4	\$ 0.7888	\$ 0.9072	\$ 1.0256
Edit clerk obligates funds/electronically signs	GS-7	0.1972	0.2268	0.2564	1	\$ 0.1972	\$ 0.2268	\$ 0.2564
PSD reviews claim	E5/6 GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Enters claim into computer	E5/6 GS5	0.1115	0.1595	0.2307	5	\$ 0.5575	\$ 0.7975	\$ 1.1535
Audits claim	E6	0.1270	0.1587	0.1904	5	\$ 0.6350	\$ 0.7935	\$ 0.9520
Hands completed claim to check writer	E5/6 GS5	0.1115	0.1595	0.2307	1	\$ 0.1115	\$ 0.1595	\$ 0.2307
Check writer prepares payment for traveler	GS-5	0.1592	0.1831	0.2070	3	\$ 0.4776	\$ 0.5493	\$ 0.6210
Checkwriter processes mail to mail check to traveler	GS-5	0.1592	0.1831	0.2070	1	\$ 0.1592	\$ 0.1831	\$ 0.2070
				Totals	39	\$ 9.51	\$ 10.83	\$ 12.44
		With Benefits				\$ 13.59	\$ 15.49	\$ 17.79

APPENDIX D: ESTIMATED PAY CHARTS

GS-4	Lowest Base Pay	Monthly	Annually	Per minute	GS-10	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$1,479.92	\$17,759.00	\$0.1423		Highest Base Pay	\$2,762.83	\$33,154.00	\$0.2657
	Average Base Pay	\$1,924.33	\$23,092.00	\$0.1850		Average Base Pay	\$3,591.42	\$43,097.00	\$0.3453
		\$1,702.13	\$20,425.50	\$0.1637			\$3,177.13	\$38,125.50	\$0.3055
GS-5	Lowest Base Pay	Monthly	Annually	Per minute	GS-11	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$1,655.75	\$19,869.00	\$0.1592		Highest Base Pay	\$3,035.50	\$36,426.00	\$0.2919
	Average Base Pay	\$2,152.42	\$25,829.00	\$0.2070		Average Base Pay	\$3,946.08	\$47,353.00	\$0.3794
		\$1,904.08	\$22,849.00	\$0.1831			\$3,490.79	\$41,889.50	\$0.3357
GS-6	Lowest Base Pay	Monthly	Annually	Per minute	GS-12	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$1,845.58	\$22,147.00	\$0.1775		Highest Base Pay	\$3,638.17	\$43,658.00	\$0.3498
	Average Base Pay	\$2,399.33	\$28,792.00	\$0.2307		Average Base Pay	\$4,740.25	\$56,883.00	\$0.4558
		\$2,122.46	\$25,469.50	\$0.2041			\$4,189.21	\$50,270.50	\$0.4028
GS-7	Lowest Base Pay	Monthly	Annually	Per minute	GS-13	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$2,050.83	\$24,610.00	\$0.1972		Highest Base Pay	\$4,326.25	\$51,915.00	\$0.4160
	Average Base Pay	\$2,666.25	\$31,995.00	\$0.2564		Average Base Pay	\$5,624.25	\$67,491.00	\$0.5408
		\$2,358.54	\$28,302.50	\$0.2268			\$4,975.25	\$59,703.00	\$0.4784
GS-8	Lowest Base Pay	Monthly	Annually	Per minute	GS-14	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$2,271.33	\$27,256.00	\$0.2184		Highest Base Pay	\$5,112.33	\$61,348.00	\$0.4916
	Average Base Pay	\$2,953.17	\$35,438.00	\$0.2840		Average Base Pay	\$6,646.17	\$79,754.00	\$0.6391
		\$2,612.25	\$31,347.00	\$0.2512			\$5,879.25	\$70,551.00	\$0.5653
GS-9	Lowest Base Pay	Monthly	Annually	Per minute	GS-15	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$2,508.83	\$30,106.00	\$0.2412		Highest Base Pay	\$6,013.50	\$72,162.00	\$0.5782
	Average Base Pay	\$3,261.67	\$39,140.00	\$0.3136		Average Base Pay	\$7,817.58	\$93,811.00	\$0.7517
		\$2,885.25	\$34,623.00	\$0.2774			\$6,915.54	\$82,986.50	\$0.6650

E-5	Lowest Base Pay	Monthly	Annually	Per minute	O3E	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$1,159.50	\$13,914.00	\$0.1115		Highest Base Pay	\$2,926.80	\$35,121.60	\$0.2814
	Average Base Pay	\$1,680.90	\$20,170.80	\$0.1616		Average Base Pay	\$3,654.00	\$43,848.00	\$0.3513
		\$1,420.20	\$17,042.40	\$0.1366			\$3,290.40	\$39,484.80	\$0.3164
E-6	Lowest Base Pay	Monthly	Annually	Per minute	O4	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$1,321.20	\$15,854.40	\$0.1270		Highest Base Pay	\$2,381.40	\$28,576.80	\$0.2290
	Average Base Pay	\$1,980.60	\$23,767.20	\$0.1904		Average Base Pay	\$4,163.10	\$49,957.20	\$0.4003
		\$1,650.90	\$19,810.80	\$0.1587			\$3,272.25	\$39,267.00	\$0.3146
O2	Lowest Base Pay	Monthly	Annually	Per minute	O5	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$1,929.90	\$23,158.80	\$0.1856		Highest Base Pay	\$2,825.40	\$33,904.80	\$0.2717
	Average Base Pay	\$2,671.50	\$32,058.00	\$0.2569		Average Base Pay	\$4,979.40	\$59,752.80	\$0.4788
		\$2,300.70	\$27,608.40	\$0.2212			\$3,902.40	\$46,828.80	\$0.3752
O3	Lowest Base Pay	Monthly	Annually	Per minute	O6	Lowest Base Pay	Monthly	Annually	Per minute
	Highest Base Pay	\$2,213.10	\$26,557.20	\$0.2128		Highest Base Pay	\$3,532.50	\$42,390.00	\$0.3397
	Average Base Pay	\$3,600.60	\$43,207.20	\$0.3462		Average Base Pay	\$6,102.60	\$73,231.20	\$0.5868
		\$2,906.85	\$34,882.20	\$0.2795			\$4,817.55	\$57,810.60	\$0.4632

01/31/96 10:40

01/01/96 00:00

NAVAL FACULTY SCHEDULE
INCLUDING LOCALITY-BASED COMPARABILITY PAYMENTS FOR RUS
EFFECTIVE JANUARY 7, 1996

01 INSTRUCTOR		03 ASSISTANT PROFESSOR		05 ASSOCIATE PROFESSOR		07 PROFESSOR		09 ADMIN 1/ FACULTY		SUPERVISORY 2/ PROFESSOR 3/ DEAN 4/ ACADEMIC DEAN	
1	\$29,362	7	\$35,488	17	\$45,898	25	\$54,629	20	\$49,047	I	\$93,526
2	\$30,382	8	\$36,509	18	\$46,815	26	\$55,745	21	\$50,164	II	\$94,659
3	\$31,404	9	\$37,529	19	\$47,931	27	\$56,860	22	\$51,280	III	\$95,792
4	\$32,424	10	\$38,551	20	\$49,047	28	\$57,976	23	\$52,396	IV	\$96,925
5	\$33,446	11	\$39,573	21	\$50,164	29	\$59,093	24	\$53,512	V	\$98,058
6	\$34,467	12	\$40,593	22	\$51,280	30	\$60,209	25	\$54,629	VI	\$99,191
7	\$35,488	13	\$41,615	23	\$52,396	31	\$61,325	26	\$55,745	VII	\$100,324
S	8	14	\$42,635	24	\$53,512	32	\$62,676	27	\$56,860	VIII	\$101,457
	9	15	\$43,657	25	\$54,629	33	\$64,026	28	\$57,976	IX	\$102,590
T	10	16	\$44,678	26	\$55,745	34	\$65,377	29	\$59,093	X	\$103,723
	11	17	\$45,698	27	\$56,860	35	\$66,728	30	\$60,209	XI	\$104,856
E	12	18	\$46,815	28	\$57,976	36	\$68,078	31	\$61,325	XII	\$105,988
	13	19	\$47,931	29	\$59,093	37	\$69,430	32	\$62,676	XIII	\$107,121
P	14	20	\$49,047	30	\$60,209	38	\$70,780	33	\$64,026	XIV	\$108,254
	15	21	\$50,164	31	\$61,325	39	\$72,131	34	\$65,377	XV	\$109,386
	16	22	\$51,280	32	\$62,676	40	\$73,481	35	\$66,728	XVI	\$110,519
	17	23	\$52,396	33	\$64,026	41	\$74,832	36	\$68,078	XVII	\$111,652
	18	24	\$53,512	34	\$65,377	42	\$76,183	37	\$69,430	XVIII	\$112,785
	19	25	\$54,629	35	\$66,728	43	\$77,533	38	\$70,780	XIX	\$113,918
	20	26	\$55,745	36	\$68,078	44	\$78,884	39	\$72,131		(\$113,918)
	21	27	\$56,860	37	\$69,430	45	\$80,234	40	\$73,481		
		28	\$57,976	38	\$70,780	46	\$81,585	41	\$74,832		
		29	\$59,093	39	\$72,131	47	\$82,935	42	\$76,183		
		30	\$60,209	40	\$73,481	48	\$84,286	43	\$77,533		
		31	\$61,325	41	\$74,832	49	\$85,637	44	\$78,884	1/ Senior Professor	
		32	\$62,676	42	\$76,183	50	\$86,987	45	\$80,234	at the Naval	
		33	\$64,026	43	\$77,533	51	\$88,339	46	\$81,585	Academy	
		34	\$65,377	44	\$78,884	52	\$89,689	47	\$82,935	Department Ch	
		35	\$66,728	45	\$80,234	53	\$91,040	48	\$84,286	Associate or	
		36	\$68,078	46	\$81,585	54	\$92,390	49	\$85,637	Assistant Dean	
		37	\$69,430	47	\$82,935	55	\$93,741	50	\$86,987	the Postgraduate	
		38	\$70,780	48	\$84,286	56	\$95,092	51	\$88,339	School	
		39	\$72,131	49	\$85,637	57	\$96,442	52	\$89,689		
		40	\$73,481	50	\$86,987	58	\$97,793	53	\$91,040	2/ Naval Academy	
		41	\$74,832	51	\$88,339	59	\$99,143	54	\$92,390		
		42	\$76,183	52	\$89,689	60	\$100,494	55	\$93,741	3/ Postgraduate	
			(\$85,796)		(\$101,108)	61	\$101,844	56	\$95,092	School	
						62	\$103,195	57	\$96,442		
						63	\$104,545	58	\$97,793	4/ This category	
						64	\$105,897	59	\$99,143	be used at the	
						65	\$107,248	60	\$100,494	discretion of th	
						66	\$108,598	61	\$101,844	Superintendent	
							(\$113,918)	62	\$103,195	compensation	
								63	\$104,545	Distinguished	
								64	\$105,897	Visiting	
								65	\$107,248	Professors	
								66	\$108,598		
								67	\$109,949		
								68	\$111,299		
								69	\$112,650		
									(\$113,918)		

() Indicates maximum permissible under pay banding
 Maximum for pay banding ranges limited to the rate of ES-4, currently \$113,918. However, rates for individual faculty members above ES-4 up to the rate of level IV of the Executive Schedule, currently \$115,700, may be authorized by the DONCERS.

Enclosure (

APPENDIX E: NPS TRAVEL REQUEST WORKSHEET

TRAVEL REQUEST FORM

NAME: _____ SSN: _____
 DEPARTMENT: _____ CODE: _____
 DATES OF TRAVEL: _____ DATES OF LEAVE: _____
 ITINERARY: _____
 PURPOSE: _____

*** IF NO COST TO GOVERNMENT:**

(A) WHO IS FUNDING TRAVEL?

PERSONAL FUNDS: _____

PRIVATE COMPANY/UNIVERSITY(Name): _____

(B) HOW IS SALARY BEING PAID WHILE ON NO COST ORDERS?

O&MN: _____ AL: _____ LWOP: _____ OTHER (Explain) _____

IF O&MN, JUSTIFICATION (Value to U.S. Government): _____

(C) WILL AN HONORARIUM BE RECEIVED? YES _____ NO _____

(D) NO. OF DAYS OF NO COST TAD WHILE IN A PAY STATUS: _____

SIGNATURES:

TRAVELER _____

(Date)

DEPT. HEAD / CURRIC. OFFCR _____

(Date)

CODE 08 (If Research \$3,000 or more) _____

(Date)

P.J. (If Research Funds) _____

(Date)

LINE MANAGER _____

(Date)

ESTIMATED COSTS:

TRANSPORTATION

Comm'l. Air (GIR) _____

\$ _____

PER DIEM** _____

\$ _____

REGISTRATION/

TUITION FEES _____

\$ _____

TOTAL

\$ _____

**** Breakdown of Per Diem Costs:**

Lodging & Meals: \$ _____

Rental Car: \$ _____

POV: \$ _____

Taxi: \$ _____

Rail: \$ _____

Other (Specify): _____

\$ _____

SUPERINTENDENT APPROVAL (Required when (1) total estimated costs equal or exceed \$3,000; (2) total days of delay and leave equals or exceeds the total days of TAD; or (3) when civilian no cost orders exceed five (5) calendar days while in a pay status.)

 SUPERINTENDENT

Date: _____

(SEE REVERSE)

IT IS THE RESPONSIBILITY OF THE DEPT. CHAIRMAN TO ENSURE THAT LABOR AND TRAVEL FUNDING ARE PAID FROM THE APPROPRIATE SOURCES.

NOTE: WHEN ON OFFICIAL TRAVEL, LABOR FUNDING WILL NORMALLY COME FROM THE SAME ACCOUNT AS TRAVEL FUNDING. EXCEPTION IS IF THE TRIP IS TO SUPPORT MULTIPLE FUNCTIONS OF THE SCHOOL. IN THAT CASE, IF THE TIME SPENT ON ONE OF THESE FUNCTIONS EXCEEDS 50% OF THE TRIP, THERE IS NO NEED FOR SPLIT ACCOUNTING FOR TRAVEL; I.E., THE PREPONDERANT FUNCTION CAN FULLY FUND THE TRAVEL. HOWEVER, LABOR MUST BE PRORATED FOR ACTUAL TIME SPENT ON EACH FUNCTION.

FUNDING ACCOUNT FOR LABOR

<u>Job Order</u>	<u>Hours</u>
DT _____	_____
DR _____	_____
IR _____	_____
RR _____	_____

FUNDING ACCOUNT FOR TRAVEL

<u>Job Order</u>
OPTAR _____
DR _____
IR _____
RR _____

(DT = Direct Teaching; DR = Direct Research; IR = Indirect Research; RR = Reimbursable Research)

* IF ALL OR ANY PORTION OF THE TRAVEL IS BEING FUNDED, OR PROVIDED IN KIND, BY OTHER THAN U.S. GOVERNMENT SOURCES, AND IF THE DOLLAR VALUE EXCEEDS \$250, COMPLETE FORM "GIFTS OF TRAVEL FROM NON-FEDERAL SOURCES" AND ATTACH TO ORDERS.

** IF TRAVEL COMMENCES ON A FRIDAY OR WEEKEND DAY, AND/OR RETURN IS ON MONDAY OR WEEKEND DAY, JUSTIFICATION FOR WEEKEND TRAVEL: _____

ACCOUNTING INFORMATION

AA _____
AB _____
AC _____
AD _____

JUSTIFICATION IF SPLIT ACCOUNTING IS REQUIRED (If split accounting is used, labor must be charged proportionately): _____

REVISION 3/1/93

PLEASE FAX TO (408) 655-4485

REQUEST FOR TRAVEL

Name of Traveler (Last, First)	RANK/RATE	Activity attached to	Activity to be visited

RESERVATIONS BY: _____

OFFICE PHONE: _____

SSN OF TRAVELER: _____

YOUR FAX NUMBER: _____

EXACT LOCATION: _____

HOME TELEPHONE: _____

HOTEL RESERVATION ONLY: _____

BOQ REQUEST ONLY: _____

CC#: _____ EXP DATE: _____

NAME OF BASE TO BE VISITED: _____

RATE AUTHORIZED: _____

POC WHERE VISITING: _____

OFFICIAL PASSPORT NUMBER: _____

POC PHONE NUMBER: _____

ISSUE DATE: _____ EXP DATE: _____

RESERVATIONS REQUIRED

Departure Date	Approximate Departure Time	**Must Arrive By	From	To
Return Date				

**Latest time traveler can arrive at destination for TDY. This space may be left blank if exact arrival time is not important.

Seat Preference: ☐ Smoking ☐ Non-Smoking ☐ Window ☐ Aisle

Traveler Authorized Rental Car: ☐ Yes ☐ No Size of Car Authorized _____

Navy contract requires use of GSA Contract carriers in accordance with the Federal Travel Directory. Under the terms of the contract the government has guaranteed the airline named in the contract all Federal Travel between your origin and destination. You are advised that having the ticket reissued on another carrier for personal preference or convenience is prohibited. If it is necessary to change airlines as a result of flight cancellations or changes to travel requirements, a statement as to the reason should be included on the travel voucher.

Companies with which MTHC has negotiated special DOD/Government car rental rates will be used to the exclusion of all others. Navy contract requires use of the lowest available rate.

Note: Travelers are not required to select airline or flight number. Travel clerks are required to arrange least costly travel available.

PRIVACY ACT STATEMENT: The authority to request this information is contained in 5 USC 552 Department Regulations. This information will be used to assist officer and employees of the Department of the Navy in arranging passenger transportation. Completion of the form is mandatory except for SSN (SSN is mandatory for overseas travel and BOQ reservation). Failure to provide required information may result in delay in response or disapproval of your request.

Signature	Date
-----------	------

TRAVEL REQUEST FORM SUPPLEMENT

=====

*BOQ AVAILABLE AT: _____

BOQ CONFIRMATION #: _____ COST: \$ _____ /NIGHT

*BOQ NOT AVAILABLE AT:

(1) _____	NON-AVAILABILITY # _____
or (2) _____	NON-AVAILABILITY # _____
or (3) _____	NON-AVAILABILITY # _____

(NOTE: MAY REQUIRE MORE THAN ONE NON-AVAILABILITY # FOR AREAS WITH MULTIPLE BOQS AVAILABLE.)

*IF BOQ NON-AVAILABILITY # IS NOT PROVIDED, PLEASE EXPLAIN:

ADVANCE REQUESTED: YES _____ NO _____

POV: YES _____ NO _____

RENTAL CAR: YES _____ NO _____

=====

APPENDIX F: NPV BURDEN TABLE

Net Present Value (NPV) and Internal Rate of Return (IRR) Calculations

	1995	1996	1997	1998	1999	2000	NPV	IRR
Partial Implementation (low)								
Outlays	\$ 24,588.00	\$ (63,243.11)	\$ (208,511.59)	\$ (88,511.59)	\$ (88,511.59)	\$ (88,511.59)		
Savings	\$ -	\$ -	\$ 128,187.55	\$ 128,187.55	\$ 128,187.55	\$ 128,187.55		
Net Savings	\$ (24,588.00)	\$ (63,243.11)	\$ (80,324.04)	\$ 39,675.96	\$ 39,675.96	\$ 39,675.96	(\$53,849.43)	-12%
Partial Implementation (Med)								
Outlays	\$ 24,588.00	\$ (63,243.11)	\$ (208,511.59)	\$ (88,511.59)	\$ (88,511.59)	\$ (88,511.59)		
Savings	\$ -	\$ -	\$ 139,428.90	\$ 139,428.90	\$ 139,428.90	\$ 139,428.90		
Net Savings	\$ (24,588.00)	\$ (63,243.11)	\$ (69,082.69)	\$ 50,917.31	\$ 50,917.31	\$ 50,917.31	(\$13,946.56)	-1%
Partial Implementation (High)								
Outlays	\$ 24,588.00	\$ (63,243.11)	\$ (208,511.59)	\$ (88,511.59)	\$ (88,511.59)	\$ (88,511.59)		
Savings	\$ -	\$ -	\$ 272,785.45	\$ 272,785.45	\$ 272,785.45	\$ 272,785.45		
Net Savings	\$ (24,588.00)	\$ (63,243.11)	\$ 64,273.86	\$ 184,273.86	\$ 184,273.86	\$ 184,273.86	\$459,422.63	100%
Full Implementation (Low)								
Outlays	\$ 24,588.00	\$ (63,243.11)	\$ (208,511.59)	\$ (88,511.59)	\$ (88,511.59)	\$ (88,511.59)		
Savings	\$ -	\$ -	\$ 174,127.90	\$ 174,127.90	\$ 174,127.90	\$ 174,127.90		
Net Savings	\$ (24,588.00)	\$ (63,243.11)	\$ (34,383.69)	\$ 85,616.31	\$ 85,616.31	\$ 85,616.31	\$109,222.77	29%
Full Implementation (Med)								
Outlays	\$ 24,588.00	\$ (63,243.11)	\$ (208,511.59)	\$ (88,511.59)	\$ (88,511.59)	\$ (88,511.59)		
Savings	\$ -	\$ -	\$ 177,839.66	\$ 177,839.66	\$ 177,839.66	\$ 177,839.66		
Net Savings	\$ (24,588.00)	\$ (63,243.11)	\$ (30,671.93)	\$ 89,328.07	\$ 89,328.07	\$ 89,328.07	\$122,398.22	32%
Full Implementation (High)								
Outlays	\$ 24,588.00	\$ (63,243.11)	\$ (208,511.59)	\$ (88,511.59)	\$ (88,511.59)	\$ (88,511.59)		
Savings	\$ -	\$ -	\$ 303,070.15	\$ 303,070.15	\$ 303,070.15	\$ 303,070.15		
Net Savings	\$ (24,588.00)	\$ (63,243.11)	\$ 94,558.56	\$ 214,558.56	\$ 214,558.56	\$ 214,558.56	\$566,922.74	119%

Discount rate (r) 0.027

APPENDIX G. STAKEHOLDER SHORT ESSAY RESPONSES TO SURVEY

In our survey, we asked the following question: In your opinion, what type of performance measures (general or specific) do you feel would be indicative of a highly functional travel process? The following responses were given by various stakeholders in the process.

From the Traveler:

- ▶ Measures--Time to receive reservations after PSD request.
Time needed to process voucher.
- ▶ Ticket in hand, as requested, within 48 hrs of request.
- ▶ A longer time span, than one day, to pick up orders and/or airline tickets. Because if there is a misunderstanding or a mistake, it takes the rest of the day to correct it.
- ▶ Once I submit my 1556 for travel, to receive a notice if approved so I could make reservations for BOQ or hotels or class training before they all fill up.
- ▶ I would measure time from beginning to travel planning to tickets in hand. This is the most critical time span for mission accomplishment.
- ▶ Minimum time filling out forms
Arrival of orders and tickets in a timely manner
Traveler satisfaction with itinerary
- ▶ Pre-travel paper work approval time and reservation completion time.
- ▶ Accuracy and turn-around time
- ▶ Travel plan confirmation time is most critical; minimum of errors in making the reservations so that you do not have to re-do (sometimes it is the traveler's plans change); voucher turnaround is not that critical as long as check arrives before travel credit card bill is due.

- ▶ Minimal time to process travel
- Satisfaction of traveler with the process
- Voucher turnaround time
- Friendliness of PSD
- Minimal faculty/staff time involved
- Error rate

From the DTR/Administrative support personnel:

- ▶ Advance notice-no last minute travel.
- ▶ Fewer chops/stops should be needed to complete the paperwork. 10 people are involved in turnover of travel.
- ▶ Bypass comptrollers, we keep accounts through individual offices. SABER system accessible to offices for price confirmations
- ▶ A one stop shop would eliminate the frustration of trying to track down where the travel orders are.
- ▶ Forms forwarded in a timely fashion to proper offices. Travel people respond pleasantly instead of grudgingly (if you don't like your job, find another).
- ▶ The travel process in the comptroller's office should be looked at for improvements. Travel orders appear to take so long to process because they go through too many hands and sometimes get lost in the shuffle. Tickets cannot be processed by PSD until travel orders are received.
- ▶ More cooperation between the comptroller's office and PSD. Less paperwork. The comptroller's office requires us to send them 6 hard copies of the 1610 with carbons inserted between pages--most time consuming. Too many people still need a hard copy of everything.
- ▶ Knowledge of travel, accounting procedures.
- ▶ Ease of being able to obtain the necessary travel arrangements. Ability of system to process travel on the spur of the moment! No stupid requirements!
- ▶ One stop shopping.

- ▶ The one stop shopping idea, or at least a variation of that idea, was the simplest and most efficient. As indicated throughout the responses to this survey, it is the traveler who initiates the travel need and comes to the DTR. From that point, the DTR's office then becomes the "one place to go to have everything done--travel arrangements, coordination with SATO/PSD, questions and answers, processing advances, doing vouchers, etc. " This arrangement enable the DTR to keep management apprised, fairly accurately, of the estimated/actual costs of travel and the up to date status of travel orders processing on a traveler at practically any given time.
- ▶ Eliminate the Comptroller's office.
- ▶ Errors from PSD and turnaround time.
- ▶ The ability to have urgent ravel processed quickly.
Claims are slow. We have 5 days to have claims turned in and it takes them one-two weeks to send the check.
Better customer service. Questions, regardless of how "lame" they may sound should be answered courteously.
- ▶ Consistency
Simplicity
Less duplicity
DTR's kept up to date on procedures and changes.
- ▶ Travel orders typed electronically, issuing tickets by confirmation only (Delta, United), or check is at airline counter and board the plane. Travel Manager is an excellent system, however, all Departments aren't online. I think everyone should be using Travel Manager.
- ▶ Timeliness and accuracy in dealing with the Comptroller's office and PSD. Comptroller-funds are posted accurately when the final claims go thru and the ability to turnaround orders quickly.
PSD/SATO-Travel arrangements made and itinerary faxed back to the departments within 48 hrs. Tickets and orders are ready promptly.
- ▶ I think everyone should use the same orders (DD1610)--Eliminate TEMADD travel orders and ITO's.
This method of travel processing could save more time by applying electronic transmittal via computer.
- ▶ Less restrictive regulation and/or more consistent interpretation of regulations. Too many DFAS obstacles for TMP.

From Management and Department Chairs:

- ▶ The best current measure is the level of complaints.
Two measures would be the time between traveler request and receipt of tickets, as well as the length of time between receipt of ticket and departure.
Another would be the time between submission and receipt of reimbursement.
- ▶ It would be nice not to have 3 different repetitive forms to fill out just to get started.
I don't think we should have each department making up different performance measurement systems for common tasks like travel.

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