

# Research on Process Optimization and Unified System Content in Big Data Network Information Sharing Environment

Quangen Gu\* and Lingyao Li

Suzhou Institute of Trade & Commerce, Jiangsu, China

\*Corresponding author: 2006022212@szjm.edu.cn

**Abstract.** In the context of big data and data sharing, companies are strengthening internal control to enable companies to develop healthily and sustainably. Business process planning is the key to the success or failure of internal control. This article takes S Group as an example to discuss the optimization of its expense reimbursement business planning, which has certain reference value for enterprise expense reimbursement business control.

**Keywords:** Data sharing, Expense reimbursement, Process optimization.

## 1. Introduction

In the environment of big data and data sharing, it is critical to optimize the regulations and processes of various businesses, which is related to the implementation effect of internal control, especially for the numerous expense reimbursement businesses of homogeneous transactions. This article takes S Group as an example to discuss the optimization of its expense reimbursement business planning.

## 2. Importance of Expense Reimbursement Business Planning

Because the expense reimbursement business involves large volume of transactions with a wide range which is difficult to control, the expense reimbursement planning is extremely important in the construction.

### 2.1. Affect the management process of expense reimbursement

The reimbursement application and its approvals are standardized, which can reduce the time and effort spent on the submission, approval and payment of expense reimbursement.

### 2.2. Affect expense reimbursement control

Reimbursement limits and reimbursement criteria must be clearly defined in the reimbursement business planning in order to implement controls during the reimbursement process.

### 2.3. Affect form delivery and approval

After the implementation of data sharing, the system presets a large number of document templates, which can ensure the timeliness of the production, delivery and audit of forms.



#### 2.4. *Affect cost real-time query*

The financial sharing center supports the multi-dimensional, multi-level, and multi-way query, which can meet the query needs of the expense by personnel in different positions during different periods.

### 3. Analysis on the Problems Existing in Expense Reimbursement

S Group's accounting units are spread all over the country, with a large geographical management area and many management levels, which increases the difficulty and risk of management.

#### 3.1. *The expense reimbursement system is not uniform*

3.1.1. *The scope of reimbursement is not uniform.* Travel and transportation expenses are not under refined management. The reimbursement scope of travel expenses is not uniform, and the account settings to record the reimbursement transactions is not uniform.

3.1.2. *The filling time is not uniform.* Travel loan management is not uniform, there is no provision that accounting processing should be done according to the "repayment priority" principle.

3.1.3. *Accommodation standards are not uniform.* Since the implementation of travel expense control is not strict, accommodation standards are not clearly graded and unified.

3.1.4. *Travel grants are not uniform.* There is still some situation that the group cannot understand. Consequently, the relevant provisions of the travel subsidy has not been harmonized.

3.1.5. *Travel loan is not uniform.* There are significant differences between the subsidiaries on the relevant provisions for travel advances.

3.1.6. *Payment times are not uniform.* The financial supervisions of projects by the group are relatively difficult, and payment time is not uniform.

3.1.7. *Payment banks are not uniform.* Since the payment banks are different, the group cannot effectively control the cost of payment.

After the financial sharing is implemented in S Group, the reimbursement system must be unified in order to better improve the existing cost reimbursement business process. It effectively reduces costs and risks of corporate control.

#### 3.2. *Inconsistent reimbursement control process*

3.2.1. *Differences in filling reimbursement form.* There are differences in filling out electronic claims and paper claims.

Differences in filling electronic claim form. If the reimbursement of travel expenses is beyond the standard, the subsidiary B and C require employees to fill "ultra-standard reimbursement Application Form" in the online reimbursement system with the approval of project managers online, and subsidiary A, D and E do not have such requirements.

Differences in filling paper claim form. At the time of filling in the electronic claim form, the ticket, accommodation invoice and other physical documents should be affixed to the paper claim form, and signed by the claimant himself.

However, there are differences in the specific provisions of the reimbursement form for each subsidiary.

3.2.2. *Approval differences.* The subsidiary's approval requirements are described as follows:

Subsidiaries A, D, E: All travel expenses are subject to the online approval by the department manager and project manager.

Subsidiary B: The super standard reimbursement application form also needs to be approved by the project manager.

Subsidiary C: All travel expenses are subject to the online approval of the department manager and project manager.

The ultra-standard reimbursement application form also needs to be approved at the project manager level.

*3.2.3. Audit differences.* The audit requirements for each subsidiary are different:

Subsidiary A: The claimant is required to submit the paper to the relevant accountants. After the audit is passed, the electronic claim documents approved by the relevant managers are printed and pasted.

Subsidiary B: The relevant accounting personnel for audit. Accountants are also required to check whether there is an individual loan from the claimant. If there is an individual loan, reverse the loan before the reimbursement of the excess amount.

Subsidiary C, D, E: The claimant is required to submit the paper claims affixed with the physical documents to the relevant accountants for audit, print and pastes the electronic claims approved by the relevant leadership.

*3.2.4. Settlement payment differences.* The differences in settlement payments for each subsidiary are shown as following:

Subsidiary A: the cashier will directly carry out settlement and payment based on the paper claims that are approved by relevant managers, and complete the reimbursement process of the claimant's travel claims.

Subsidiaries B, C, D, E: When the accountant finds out that the claimant has borrowings, there is still an excess amount to be reimbursed after the cancellation of the loan, which is executed and paid by the cashier.

*3.2.5. Differences in financial vouchers.* There are also differences in the generation of financial vouchers among subsidiaries.

#### **4. Main Contents of Expense Reimbursement Planning**

In view of the differences in the above expense reimbursement business, the main contents of the expense reimbursement planning in the financial sharing construction of S group are described below.

##### *4.1. Unified management system for the expense reimbursement business*

In view of the differences in the above-mentioned expense reimbursement business, the main content of the expense reimbursement business plan in the construction of S Group Financial Sharing is expressed as follows. (Table 1).

**Table 1.** Unified System Content and Management Objectives.

S/N	Project	Unified System Content	Objectives met
1	Reimbursement range	<p>The travel expenses reimbursement includes all the flight expenses, vehicle and boat fees, accommodation fees, travel allowances, etc. incurred by all employees due to business trips, study and training.</p> <p>Travel expenses reimbursement is calculated using "travel expenses" when accounting processing is performed; and the city transportation expenses incurred are calculated using "traffic expenses", so that the expenses are finely managed.</p>	Realize the detailed management of travel expenses and transportation expenses, and unify the scope of travel expenses reimbursement. Relevant detailed account settings related to unified travel expense reimbursement accounting.
2	Report time	In order to truly reflect the monthly travel expenses, employees are required to apply for reimbursement within 10 working days after the business trip.	According to the principle of accrual basis, the authenticity of monthly travel expenses is guaranteed.
3	Accommodation standard	Different accommodation standards shall be set according to the classification of Category 1, Category 2 and Category III. Employees shall be reimbursed within the scope of this standard (see the attached table for specific regional classification and accommodation standards).	Strengthen the management of travel expenses and strict reimbursement standards.
4	Travel subsidy	According to the departure time, arrival time, travel area and other different content to set different standards of travel assistance, employees should be reimbursed within this standard limit (specific area classification and subsidy standards are shown in the attached table).	Strengthen travel control, strict cost reimbursement standards.
5	Travel loans	Company employees because of business travel and personal borrowing, the maximum amount of borrowing is 5000 yuan/time, the borrower is not allowed to borrow again in principle.	Strengthen the management of travel loans, according to the "repayment priority" principle of accounting processing.
6	Payment time	Real-time settlement payments are made by the cashier's daily travel expense reimbursement documents for all approvals and audits.	Improve employee satisfaction with travel expenses reimbursement.
7	Payment bank	China Construction Bank.	To some extent, the fee paid by the bank is reduced.

**Annex: Regional Classification, Accommodation and Subsidy Standards**

Regional classification	Accommodation standard	Subsidy standard (the days of departure and arrival shall be calculated as one full day)	Regional classification description
One type of area	400 yuan / day	150 yuan / person / day	Beijing, Shanghai, Guangzhou, Shenzhen, Xiamen, Hangzhou, Suzhou, Nanjing
Second-class area	350 yuan / day	100 yuan / person / day	Each provincial capital city, municipality directly under the Central Government (Tianjin, Chongqing) and planned cities (Dalian, Qingdao)
Three types of areas	250 yuan / day	80 yuan / person / day	other areas

**4.2. Expense reimbursement process optimization**

**4.2.1. Reimbursement process.** According to the unified management system of expense reimbursement business, the expense reimbursement process of S group is reconstructed, and the reimbursement business process, responsibility department/position and input/output document planning are as follows (Table 2):

**Filing:** The relevant personnel fill expense reimbursement application forms in the online reporting platform, and then submit to the first-inspector affixed with invoices and other related physical documents.

**Preliminary examination:** The first inspectors review the expense reimbursement application forms and submit to the relevant leadership for approval. They need scan the relevant physical documents and upload the image in order to facilitate the relevant personnel to review the physical document image.

**Approval:** Relevant leaders (such as department managers, finance supervisors, etc.) check the authenticity and completeness of the statement and physical document images, and submit to the financial auditor.

**Audit:** The financial auditor checks the authenticity and the integrity of the statement and the physical document image, and then generates the expense reimbursement financial vouchers.

**Settlement payment:** If the transaction requires calculating before settlement, the accounting staff will also be required to settle for the approved electronic claims payments.

**Financial vouchers:** Financial personnel generate financial vouchers from the voucher system, and perform verification, review, and accounting according to their authority.

**Accounting files:** The accounting archivist will organized vouchers, claims into a book of accounting files.

At this point, the design of the travel claims sharing business processing planning is complete (see Table 2).

**Table 2.** Reimbursement Business Processes and Responsible Departments.

Step		Responsible department / post	Input	Output
No.	Name			
01	Report	Reimbursement	Train receipts, ticket itineraries, taxi tickets, etc.	Electronic reimbursement form
02	Initial review scan	Documentary reviewer	Paper reimbursement form with physical documents	Upload the physical document information of the image system
03	Approval	Department manager,	Electronic reimbursement form, super standard reimbursement application form	Approved electronic claim form, super standard reimbursement application form
04	Audit	project manager	Approved electronic claims, physical documents, super standard reimbursement application forms, personal loan details	Approved electronic reimbursement form, physical documents, super standard reimbursement application form
05	Settlement payment	Accounting staff	Approved electronic claims	Payment success information
06	Financial document	Cashier	Payment success information	Travel expenses reimbursement financial documents
07	Accounting file	Accounting staff	Electronic reimbursement form, accounting documents and physical documents	Organized into a book of accounting files

4.2.2. *Business process optimization.* The reimbursement process is unified and optimized after the reconstruction, and its contents and management objectives are summarized in the following table (Table 3).

**Table 3.** Process Optimization Specific Content and Management Objectives.

S/N	Process unification/optimization of Content	Achieved Management Objectives
1	The reimbursement person fills in the bill of lading in accordance with the rules of the sharing center in the online reimbursement system, and the original documents are uniformly pasted and submitted to the preliminary examination post of the documents.	Through the planning of the financial related center travel expenses reimbursement business related positions, the resources are reasonable and optimized.
2	The documentary scan is performed by the first-inspector, and the original document is scanned to the designated location of the server through the high-speed photographic apparatus, paving the way for the matching of the subsequent documents with the original document image; at the same time, the preliminary auditor needs to verify the accuracy of the invoice.	The form style of the unified travel expense reimbursement process facilitates the timeliness of form production, delivery and review.
3	The approval of the reimbursement form is made by the leaders at all levels	Improve the level of monitoring of relevant physical documents related to travel expenses reimbursement by relevant leaders.
4	The approved reimbursement form is transferred to the financial audit position. The financial audit position reconciles the original documents with the reimbursement information.	Reduce the rework rate that requires re-reimbursement due to the failure of the original document audit.
5	The approved reimbursement form is paid through the funding system.	The reimbursement business will be included in the sharing, and the centralized processing of the business will be realized. The efficiency, cost and risk management and control will be optimized to a certain extent.
6	The financial document is automatically generated through the credential interface function. The generated voucher needs to be verified, audited, and billed for processing.	Unified travel expense reimbursement approval process and related requirements. A certain degree of optimization and improvement in terms of efficiency, cost and risk management.
7	The file manager organizes and archives the voucher and reimbursement form.	Improve the efficiency of accounting file storage and reduce the cost of file storage.



4.2.3. In the construction of the financial sharing center, the cost management process is standardized. (Figure 1)

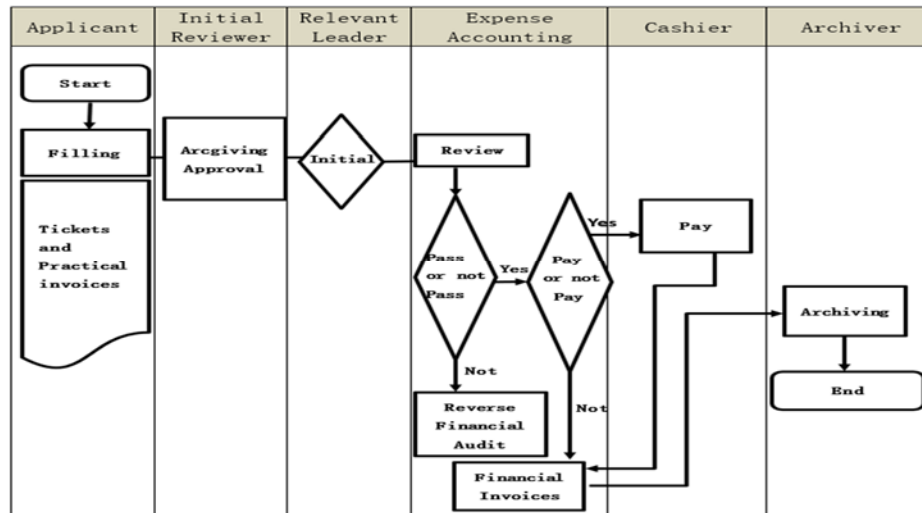


Figure 1. Reimbursement Business Optimization Flowchart.

The unification of reimbursement process of each subsidiary not only improves the efficiency of expense reimbursement submission, approval, payment and account processing, enhances employees' satisfaction and collective honor, but also makes the finance work simple and finer, which is conducive to the control of the whole process and reduces the risk of supervision. Thus, the effect of business process optimization is bound to be extremely significant.

## 5. Conclusion

In the data sharing process of the group company, various business plans are the core content, and the expense reimbursement business plan is particularly important. Expense reimbursement business involves a wide range and large business volume. The formulation of its shared construction plan requires reengineering the control process based on the analysis and analysis of the original management system of each subsidiary, and continuous improvement and adjustment during the implementation process. In order to achieve the established management goals. It is believed that with the deepening of group company data sharing, the implementation value of data sharing will be better reflected.

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