



Software management Examination Report

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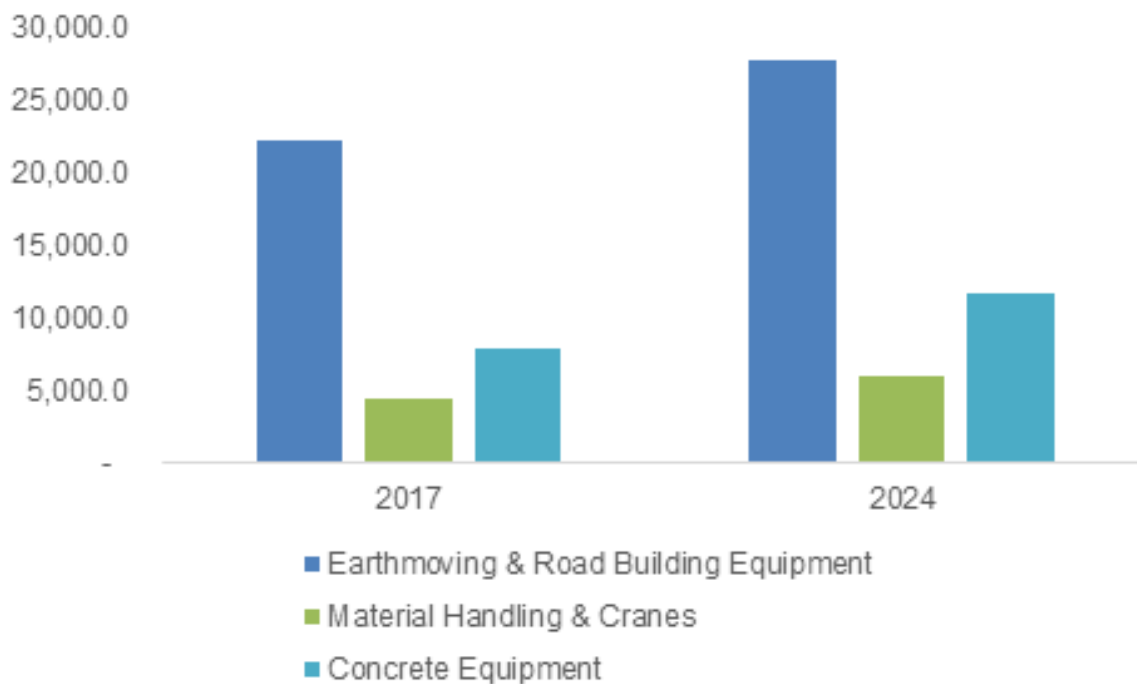
Examination Report Version 2.0
Sunstate Equipment

June 26, 2018

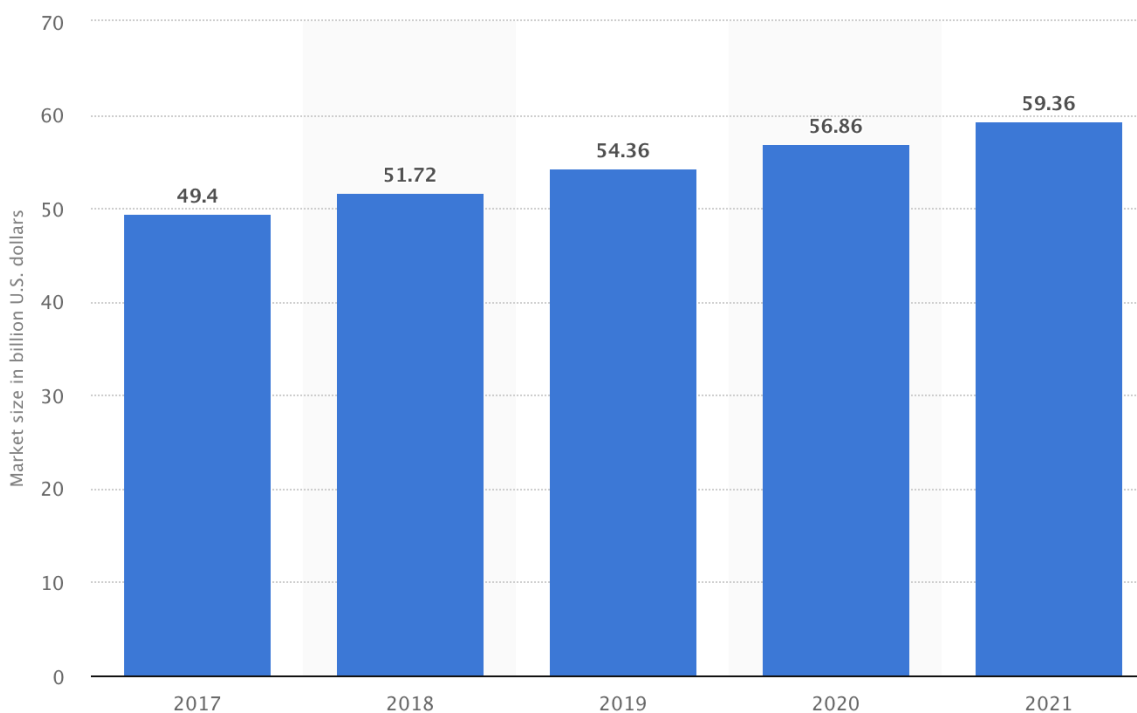
I. Objectives of the Project

A. Development objectives

Increasing number of construction activities coupled with the rising infrastructure investments will drive the construction equipment rental market growth over the forecast timeline.



U.S. Construction Equipment Rental Market, By Product, 2017 & 2024 (USD Million), Global Market Insights



U.S. equipment rental market size from 2017 to 2021 (in billion U.S. dollars), Statista

The completion of the web-based system will greatly help enlarge equipment rental market in the US and make it better. Moreover, it will modernize the operations of renting equipment and improve the efficiency, thus make life easily and the nation prosperous.

B. Immediate objectives

The project aims to adapt new technology, including real time information system, to replace the traditional manual operations with a web-based system with a database. This will make it easier and more effective to create customer information, update equipment inventory data assign jobs to trucks/drivers and update job statuses. It will help the company make more profit and customers rent equipment more easily.

Now, the company has four depots in the market area, and each truck will start and return to the depot where it belongs to. In future, the company will extend its business to the whole USA or to some foreign countries.

For the experience, it can be applied to the resembling sectors such as taxi dispatching, in-town delivery, etc. to realize a real-time and highly available web system.

II. Expected results of the Project

Overall results

- A complete web-based dispatching system which meets the requirement of conducting the dispatching operations more effectively.
- Successful transition from manual operations to the new software and database.
- Robustness and fault tolerance of the system and timely arrangement of maintenance.

Unintended effects

- Experimental technology may cause unexpected errors and failures.
- If there exists asymmetric information between the actual need and the project, the company may spend a lot for reconstruction of the software.
- Accidents due to the errors of the system and some legal issues.

Market analysis

In 2006, Sunstate ranked at No.14 in the US equipment rental market while in 2016 it ranked at No.7, with rental volume of \$500 million, according to The RER 100: Top Rental Equipment Companies of 2016.

The complete digital transformation will produce approximately 67% increase of the annual income through the planned activities and budget, according to the average statistics conducted by McKinsey..

III. Project Implementation & Management Plan

Project activities and work plan

Sunstate_schedule

	任务模式	Task Name	工期	开始时间	完成时间	前置任务	资源名称
1		Initiating	9.69 days	2018年6月18日	2018年6月29日		
2		Identify Stakeholders	3.75 days	2018年6月18日	2018年6月21日		Programme Manager
3		Prepare Project Charter	2.94 days	2018年6月21日	2018年6月26日	2	Programme Manager
4		Hold Project Kick-off	3 days	2018年6月26日	2018年6月29日	3	Programme Manager
5		Initiating Milestone	0 days	2018年6月29日	2018年6月29日	4	Programme Manager
6		Planning	19.25 days	2018年6月29日	2018年7月26日	1	
7		Create Team Contract	4 days	2018年6月29日	2018年7月5日		Programme Manager
8		Create Scope Statement	4 days	2018年6月29日	2018年7月5日	7SS	Project Manager
9		Create WBS Statement	1.5 days	2018年7月5日	2018年7月9日	8	Project Manager, Project Analyst
10		Prepare schedule and cost baseline	6.94 days	2018年7月9日	2018年7月17日	9	
11		Determine Task Resources	2.5 days	2018年7月9日	2018年7月16日		Project Manager, Project Analyst
12		Determine Task Durations	2.5 days	2018年7月9日	2018年7月11日	11SS	Project Manager, Project Analyst
13		Determine Task Dependencies	2.5 days	2018年7月9日	2018年7月11日	12SS	Project Manager, Project Analyst
14		Create Draft Gantt Chart	2.25 days	2018年7月11日	2018年7月13日	13	Project Manager
15		Review and Finalize Gantt	2 days	2018年7月13日	2018年7月17日	14	Project Manager
16		Develop and Refine Other Plans	7 days	2018年7月17日	2018年7月26日	10	Project Manager
17		Planning Milestone	0 days	2018年7月26日	2018年7月26日	16	Project Manager
18		Executing	81.88 days	2018年6月29日	2018年10月23日	1	
19		Survey	8 days	2018年6月29日	2018年7月11日		Project Manager
20		User Inputs	8 days	2018年7月11日	2018年7月23日	19	Front End Engineer, Research And Development Engineer, Database Administrator
21		Site Content	5.31 days	2018年7月23日	2018年7月30日	20	
22		Log in	5 days	2018年7月23日	2018年7月30日		Front End Engineer, Research And Development Engineer, Database Administrator
23		Contract creation	5 days	2018年7月23日	2018年7月30日	22SS, 22SS	Front End Engineer, Research And Development Engineer, Database Administrator
24		Inventory management	5 days	2018年7月23日	2018年7月30日	23SS	Front End Engineer, Research And Development Engineer, Database Administrator
25		Business data inquiry	5 days	2018年7月23日	2018年7月30日	24SS	Front End Engineer, Research And Development Engineer, Database Administrator
26		Job assignment	5 days	2018年7月24日	2018年7月30日	25SS	Front End Engineer, Research And Development Engineer, Database Administrator
27		Financial statistics	5 days	2018年7月24日	2018年7月30日	26SS	Front End Engineer, Research And Development Engineer, Database Administrator
28		Report	5 days	2018年7月24日	2018年7月30日	27SS	Front End Engineer, Research And Development Engineer, Database Administrator
29		Site Design	5 days	2018年7月31日	2018年8月6日	21	Architect Designer, Project Analyst, Quality Assurance Engineer
30		Site Construction	40 days	2018年8月7日	2018年10月1日	29	Front End Engineer, Research And Development Engineer, Database Administrator
31		Site Testing	40 days	2018年8月7日	2018年10月1日	30SS	Front End Engineer, Research And Development Engineer, Database Administrator
32		Site Promotion	5.06 days	2018年10月2日	2018年10月9日	31	System Administrator, Project Analyst, Architect Designer
33		Roll-out	2.5 days	2018年10月9日	2018年10月11日	32	Project Manager, Programme Manager
34		Support	5 days	2018年10月11日	2018年10月18日	33	
35		Training	5 days	2018年10月11日	2018年10月18日		Project Manager
36		Documentation	2.63 days	2018年10月11日	2018年10月16日	35SS	Project Analyst, Quality Assurance Engineer
37		User Support	2.5 days	2018年10月11日	2018年10月16日	36SS	Project Manager
38		Enhancement	2.5 days	2018年10月11日	2018年10月16日	37SS	System Administrator, Project Analyst, Architect Designer
39		Project Benefits Measurement	3 days	2018年10月18日	2018年10月23日	34	Project Manager
40		Executing Milestone	0 days	2018年10月23日	2018年10月23日	39	Project Manager
41		Monitoring and controlling	81.25 days	2018年6月18日	2018年10月9日		
42		Progress Report	81.25 days	2018年6月18日	2018年10月9日	2SS	Programme Manager, Project Manager, System Administrator
43		Closing	5 days	2018年10月23日	2018年10月30日	18	
44		Prepare Final Project Report	5 days	2018年10月23日	2018年10月30日		
45		Prepare Final Project Report	2.5 days	2018年10月23日	2018年10月26日	44SS	Project Manager, Programme Manager
46		Lesson Learned	2.5 days	2018年10月26日	2018年10月30日	45	Project Manager, Programme Manager
47		Saling	959 days	2018年10月30日	2022年7月4日	46	Saler
48		Operations	959 days	2018年10月30日	2022年7月4日	46	Operator

Initiating

It is the preparatory work before the project starts, mainly by the programme manager.

Planning

Prepare the project implementation plan and alternative plan, the main person in charge are project manager and project analysis

Executing

According to the plan, the project and coding are mainly completed by front end engineer, research and development, database engineer and system administrator

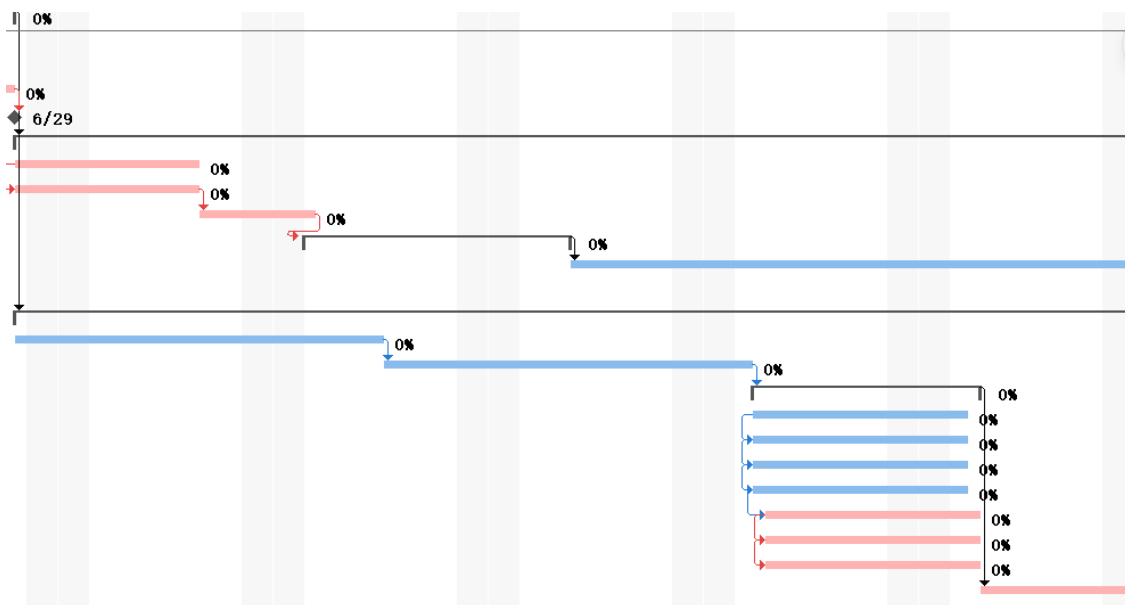
Monitoring and controlling

Test and monitor project quality throughout project development, the main person in charge is quality assurance engineer

Closing

Finish project. the main person in charge are project manager and programme manager

Gantt chart



This is a part of Gantt Chart, which shows the order and duration of a particular project by means of activity lists and timescale.

To see the detail, please check the attached file [sunstate_schedule.mpp](#).

Project Beneficiaries

counter person

For end user, the project should ensure the usability of the client/browser side. The system should be convenient enough for their daily work.

registered customer

The system should allow registered customers to query about the contract information in recent years.

financial manager/general manager

The system should allow financial managers to obtain financial data from the new system, including rent income and related costs, especially labor costs, traffic costs, warehousing costs, and at the departmental level or contract level.

At the same time, the general manager can obtain reports on transactions, revenues, costs and net income from different warehouses every week.

administrator

The system should be equipped with comprehensive operating and backstage management interfaces for administrator.

Implementing team management of project

Roles	Responsibilities and Authorities
Program Leader	Project planning and scheduling Design
	Customer interaction
	Reviews
	Testing
	Reporting
	Task assignment and tracking
	Interact with software quality adviser from SEPG
	Ensure delivery as per contract
	Interface with other departments as per need
	Ensure open issues/customer complaints are closed properly
Project manager	Ensure project members are adequately trained
	Project planning and scheduling Design
	Customer interaction
	Reviews
	Testing
	Reporting
	Task assignment and tracking
	Interact with software quality adviser from

	SEPG
	Ensure delivery as per contract
	Interface with other departments as per need
	Ensure open issues/customer complaints are closed properly
	Ensure project members are adequately trained
Architect designer	Design and maintain computer networks
	Prepare architecture design based on design requirements
	Manage, support and guide designers involved in preparing drawings
	Review design requirements and determine best design options for project.
Quality Assurance Engineer	Process consultancy
	Quality assurance (audits)
	Install measurement tools and train project personnel
	Participate in reviews of project plan and processes as necessary
Research And Development Engineer	Detail design for use cases
	Development
	Unit testing and integration testing
Configuration	Spread awareness in the team on defects and their prevention
Controller	Analyze defect data
	Identify methods to reduce defect injection
Operator	User research
	User data analysis
	The late promotion of the system
Front End Engineer	Detail design for use cases
	Develop front end
	Unit testing and integration testing
Database Analysis	Detail design for use cases
	Building and maintaining a database
	Unit testing and integration testing

Project monitoring

Routine Meeting

The team would have a routine meeting weekly, where each department report their works and process during the week. The project manager should review and confirm whether each department is processing as scheduled.

SQA plan & management

The quality manager is responsible for the project's Software Quality Assurance(SQA), according to the quality management plan. Considering that the testing part is sub-contracted to the third-party team, the SQA manager should be specifically concerned about the testing.

IV. Budget

Ref	Project Expenditures	Rate	Quantity	RMB
		RMB per Unit/Day	Units/Days	
1	Labour costs			
1.1	Project team			
1.1.1	Project manager	1000	21	21000
1.1.2	Front End Engineer	1800	61	109800
1.1.3	Research And Development Engineer	1800	61	109800
1.1.4	Quality Assurance Engineer	800	13	10400
1.1.5	Operations Engineer	700	120	84000
1.1.6	Database Analyst	800	61	48800
1.1.7	Architect Designer ⁽¹¹⁾ _(SEP)	1000	13	13000
1.1.8	Project Analyst	800	17	13600
	Sub total			410400
1.2	Subcontracting			
1.2.1	Subcontracting team	600	120	72000
	Sub total			72000
1.3	Support costs			
1.3.1	Program support	400	120	48000
1.3.2	Database Administrator	300	100	30000
1.3.3	Networking support	300	80	24000
1.3.4	User support	200	100	20000
	Sub total			122000
1.4	Project team and office costs			
1.4.1	Temporary office accommodation	300	120	36000
1.4.2	Furniture, stationery and supplies	150	120	18000
1.4.3	Additional telephones and lines	200	120	24000
1.4.4	Printing	100	120	12000
1.4.5	Project team or user awards	250	120	30000
	Sub total			120000
2	Training costs			
2.1	Training teachers	500	20	10000
2.2	Training materials	100	20	2000
2.3	Temporary internal training facilities	150	20	3000
	Sub total			15000

3	Software costs			
3.1	Application software user licenses	150	120	18000
3.2	Website permission purchase	50	120	6000
3.3	Domain name	50	120	6000
3.4	Server monitoring licenses	100	120	12000
3.5	Database user licenses	150	120	18000
	Sub total			60000
4	Hardware costs			
4.1	PC's (new or upgrades)	1000	120	120000
4.2	Servers(new or upgrades)	300	120	36000
4.3	Additional processing services	150	120	18000
	Sub total			174000
5	Network costs			
5.1	Cabling or wireless LAN, WAN	150	120	18000
5.2	Switching devices	100	80	8000
5.3	Modems	100	80	8000
5.4	Internet access eg. broadband/satellite	100	80	8000
	Sub total			42000
6	Other costs			
6.1	Quality assurance	200	120	24000
6.2	Internal audit review(s)	600	80	48000
6.3	Repair of equipment	100	120	12000
	Sub total			84000
7	Overheads			
7.1	Extra transportation cost	200	80	16000
7.2	Additional subsidized meals	100	50	5000
7.3	Overtime allowance	500	20	10000
7.4	Other allocated business costs	100	50	5000
	Sub total			36000
8	Project cost calculations			
	Total project cost			1135400

We have made the budget plan for the project in detail. We estimate it mainly based the working days of each team member, which are given in our WBS and Gantt Diagram. Expert judgement is the main model we use to design such schedule. The reason why we choose

such model is that as expert, they usually have the experience and the knowledge of a similar project to which they have participated. They can factor in differences between past project experiences and requirements of the proposed project and in impacts caused by new technologies, applications and languages. Moreover, estimation by analogy have been used to help expert judgement. We have done some research about the staffing requirements for large web sites and market prices for hardware, try to investigate some similar projects like ours, and then design ours according to the real needs.

Our budget is divided into seven parts : **Labour costs, Training costs, Software costs, Hardware costs, Network costs, Other costs, Overheads.** We can see the whole budget in the development phase is 1,135,400 RMB.

V. Financial Plan

The following section reports sales projections for Sunstate

❖ Major Assumptions

The financial plan is based on important assumptions. The key underlying assumptions are:

- We assume around 20% increasing in our revenue according to the average of IT.
- We assume the increase in sales will not bring about changes in human cost.
- We assume the fixed assets depreciation period is 4 years.
- We assume the bank loan is 500,000. The loan interest rate of 4.90%, 24 months to pay off the loan, which is matching principal and interest loans.
- Management salaries rose by 15% per year.

❖ 12-month Profit And Loss Projection

The following table is the first year projected profit and loss of Sunstate .As the table shows , the system expects to have profit after April .

Twelve-month profit and loss projection														Unit: RMB	
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total		
Revenues (gross sales)	0	0	0	0	350234	350234	350234	350234	350234	350234	350234	350234	2801872		
Less: costs of goods&service sold:	154350	154350	154350	154350	111000	111000	131000	111000	111000	131000	111000	111000	1545400		
Gross Profit	-154350	-154350	-154350	-154350	239234	239234	219234	239234	239234	219234	239234	239234	1256472		
Operating expense and Administrative expense:															
Salary	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000	720000		
Five insurance and housing fund	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	61085.84	733030.08		
Selling expense(marketing promotion 10%)	0	0	0	0	35023.4	35023.4	35023.4	35023.4	35023.4	35023.4	35023.4	35023.4	280187.2		
Depreciation(soft&hard&net 4year 5%)	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	5462.5	65550		
Interest	2,041.67	1,960.52	1,879.05	1,797.24	1,715.10	1,632.63	1,549.81	1,466.66	1,383.17	1,299.34	1,215.17	1,130.65	19,071.01		
Other expense	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	252000		
Total expenses	149590.01	149508.86	149427.39	149345.58	184286.84	184204.4	184121.55	184038.4	183954.91	183871.08	183786.91	183702.39	2069938.29		
Operating Income (income before taxes)	-303940.01	-303858.86	-303777.39	-303695.58	54947.16	55029.63	35112.45	55195.6	55279.09	35362.92	55447.09	55531.61	-813366.29		
Income taxes	0	0	0	0	0	0	0	0	0	0	0	0	0		
Net income	-303940.01	-303858.86	-303777.39	-303695.58	54947.16	55029.63	35112.45	55195.6	55279.09	35362.92	55447.09	55531.61	-813366.29		

Note:

- The development cycle is four months
- Revenues include reduced human costs and increased sales and phone costs
- costs of goods sold: Labour costs + Subcontracting + Project team and office costs + training
- costs of service sold:operating and maintenance people、counter people、dispatcher salary + water and electric + extra transportation cost + modify costs

- salary:customer service + manager + sellers
- Five insurance and housing fund:operating and maintenance people + counter people + dispatcher + customer service + manager + sellers
- Selling expense: 10% Revenues
- Depreciation = $276000 \times (1 - 5\%) / 4 / 12 = 5462.5$
- Other expense :Additional subsidized meals + Overtime allowance + Other allocated business costs

❖ 4-year Profit And Loss Projected

The first year was in state of loss, so Income tax is not needed.

Income tax : Tax=Income * 25%(Some information on the Internet)

4-Year Profit and Loss project				
	Year1	Year2	Year3	Year4
Revenues (gross sales)	2801872	4682808	5258808	5950008
Less: costs of goods&service sold	1545400	1541600	1690640	1862036
Gross Profit	1256472	3141208	3568168	4087972
Operating expense and Administrative expense:				
Salary	720000	756000	797400	845010
Five insurance and housing fund	733030.08	787763.88	844697.16	910171.08
Selling expense	280187.2	468280.8	525880.8	595000.8
Depreciation	65550	65550	65550	65550
Interest	19071.01	6848.42	0	0
Other expense	252000	252000	252000	252000
Total expenses	2069838.29	2336443.1	2485527.96	2667731.88
Operating Income (income before tax)	-813366.29	804764.9	1082640.04	1420240.12
Income taxes	0	166900.38	270660	355060.03
Net income	-813366.29	637864.52	811980.04	1065180.09

❖ 12-month Balance Sheet

The following table is the first year projected balance sheet of Sunstate .

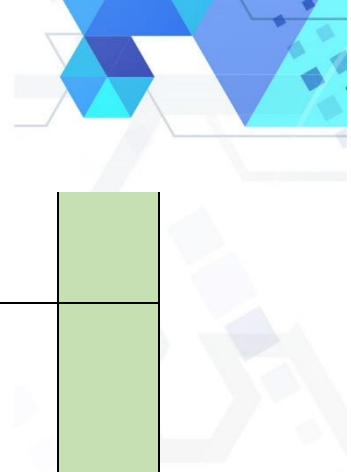
Twelve-month Balance sheet												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Assets												Final
Cash and cash equivalents	1324000	1005650.85	687301.7	368952.55	50603.4	90814.8	131026.3	151237.75	191449.2	231660.65	261872.1	292083.55
Hardware and supporting software	276000	270537.5	265075	259612.5	254150	248680	243225	237762.5	232300	226837.5	221375	215912.5
Total assets	1600000	1276188.35	952376.7	628565.05	304753.4	339502	374251.3	389000.25	423749.2	458498.15	473247.1	507996.05
Liabilities												
Loan	500000	480128.35	460176.56	440141.3	420026.23	399827.02	379546.33	359182.83	338736.18	318206.04	297592.07	276893.92
Total liabilities	500000	480128.35	460176.56	440141.3	420026.23	399827.02	379546.33	359182.83	338736.18	318206.04	297592.07	276893.92
Owner's Equity												
Retained earning	1100000	796060	492201.14	188423.75	-115271.83	-60325	-5295.03	29817.42	85013.02	140292.11	175655.03	231102.13
Total owner's equity	1100000	796060	492201.14	188423.75	-115271.83	-60325	-5295.03	29817.42	85013.02	140292.11	175655.03	231102.13
Total liabilities and owner's equity	1600000	1276188.35	952376.7	628565.05	304753.4	339502	374251.3	389000.25	423749.2	458498.15	473247.1	507996.05

Note:

1. the project is a project developed by sunstate's software department. The initial capital is approved by the company's finance department based on the project cost estimate, which amounts to 1100000 yuan.
2. Balance sheet represents the status of the software department at the beginning of each month. An additional form will be added at the end of each year to indicate the final state of the project team.
3. the monthly salary, including staff salaries and the cost of goods sold, is deducted from the cash owned by the Department.
4. Loan in the beginning is 500000.

Cash flow scenario

[illegible]



d/r eb ate s													
Ot her so urc es of cas h infl ow	-												-
To tal ot he r cas h infl ow s	1,324,00.00	-	-	-	-	-	-	-	-	-	-	-	1,324,00.00
To tal m on thl y cas h in	1,324,00.00	-	-	-	350,234.00	350,234.00	350,234.00	350,234.00	350,234.00	350,234.00	350,234.00	350,234.00	4,125,872.00

Cash out (record when actually paid)

Inventory

Co st of ser vic e	154,350.00	154,350.00	154,350.00	154,350.00	111,000.00	111,000.00	131,000.00	111,000.00	111,000.00	131,000.00	111,000.00	111,000.00	1,545,400.00
To tal C os	154,350.00	154,350.00	154,350.00	154,350.00	111,000.00	111,000.00	131,000.00	111,000.00	111,000.00	131,000.00	111,000.00	111,000.00	1,545,400.00

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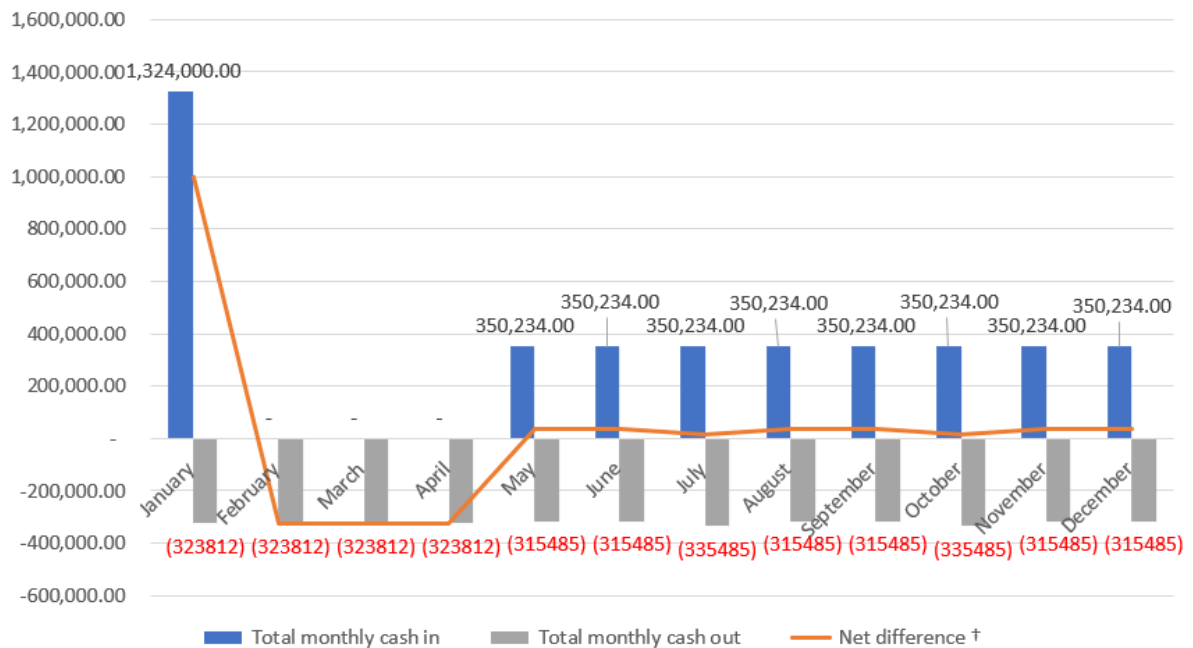
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tal Su pp lie s ex pe ns es													
Other expense													
Ot her ex pe ns e	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	
Pri nci pal Lo an rep ay me nts	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	21,91 3.31	
Ta x ex pe ns e	0	0	0	0	0	0	0	0	0	0	0	0	
To tal Ot her Ex pe ns es	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	42,9 13.3 1	514, 959. 72
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ou t													
Ne t diff ere nc e †	1,000, 188.3 5	- 323,8 11.65	- 323,8 11.65	- 323,8 11.65	34,74 8.95	34,74 8.95	14,74 8.95	34,74 8.95	34,74 8.95	14,74 8.95	34,74 8.95	34,74 8.95	
Ca sh ba la nc e at th e en d of ea ch m on th ‡	1,00 0,18 8.35	676, 376. 70	352, 565. 05	28,7 53.4 0	63,5 02.3 5	98,2 51.3 0	113, 000. 25	147, 749. 20	182, 498. 15	197, 247. 10	231, 996. 05	266, 745. 00	
Not es:													
* You may wish to write in the names of the months under the numbers to keep track. 'Month one' is the month you start the business.													
† Net difference shows if more cash came in, than went out, or vice versa; and how much.													
‡ To get the cash balance (last row), add or subtract the Net difference from the Cash balance at the start of the month (top row). This figure becomes the next month's new cash balance.													
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➤ 12-month projected cash flow diagram

12 Month Cash Flow



➤ 4-year projected cash flow work sheet

4-Year Cash flow worksheet

How to use it: Type your cash balance at the beginning in cell B10. Then type in your monthly figures for cash in and cash out, month by month. If you are using the worksheet as part of a business plan, fill out as much as you can with your cash flow projections and replace these with real figures when you have them. You can also use this cash flow worksheet to test what will happen if something changes e.g. expenses go up by 5%, using the cash flow scenario planner and report.

Cash flow scenario planner					
Changes in sales income	-				
Changes in expenses	-				
Year	2017	2018	2019	2020	Total
Cash balance at the start of each year #	0.00	266745.92	648500.66	1460481.50	
Cash in (record when actually recieved)					
Operating revenue					
Cash reciepts from customers	-	-	-		-
Collection of receivables	2,801,872.00	4,682,808.00	5,258,808.00	5,950,008.00	18,693,496.00
Other operating revenue received	-	-	-		-

Total Operating Revenue	2,801,872.00	4,682,808.00	5,258,808.00	5,950,008.00	18,693,496.00
Other Sources of Cash Inflows					
Project start-up funds	824,000.00				824,000.00
Funds borrowed	500,000.00				500,000.00
Tax refund/rebates					-
Other sources of cash inflow	-				-
Total other cash inflows	1,324,000.00	-	-		1,324,000.00
Total yearly cash in	4,125,872.00	4,682,808.00	5,258,808.00	5,950,008.00	20,017,496.00
Cash out (record when actually paid)					
Inventory					
Cost of Service	1,545,400.00	1,541,600.00	1,690,640.00	1,862,036.00	6,639,676.00
Total Cost of Service	1,545,400.00	1,541,600.00	1,690,640.00	1,862,036.00	6,639,676.00
Operating & Administrative expenses					
Training & Overhead expense	-	-	-		-
	-	-	-		-
Salary	720,000.00	756,000.00	797,400.00	845,010.00	3,118,410.00
Five insurance and housing fund	733,030.08	787763.88	844,697.16	910,171.08	3,275,662.20
Total Operating & Administrative expenses	1,453,030.08	1,543,763.88	1,642,097.16	1,755,181.08	6,394,072.20
Selling expense					
Advertising	280,187.00	468,280.00	525,880.00	595,000.00	1,869,347.00

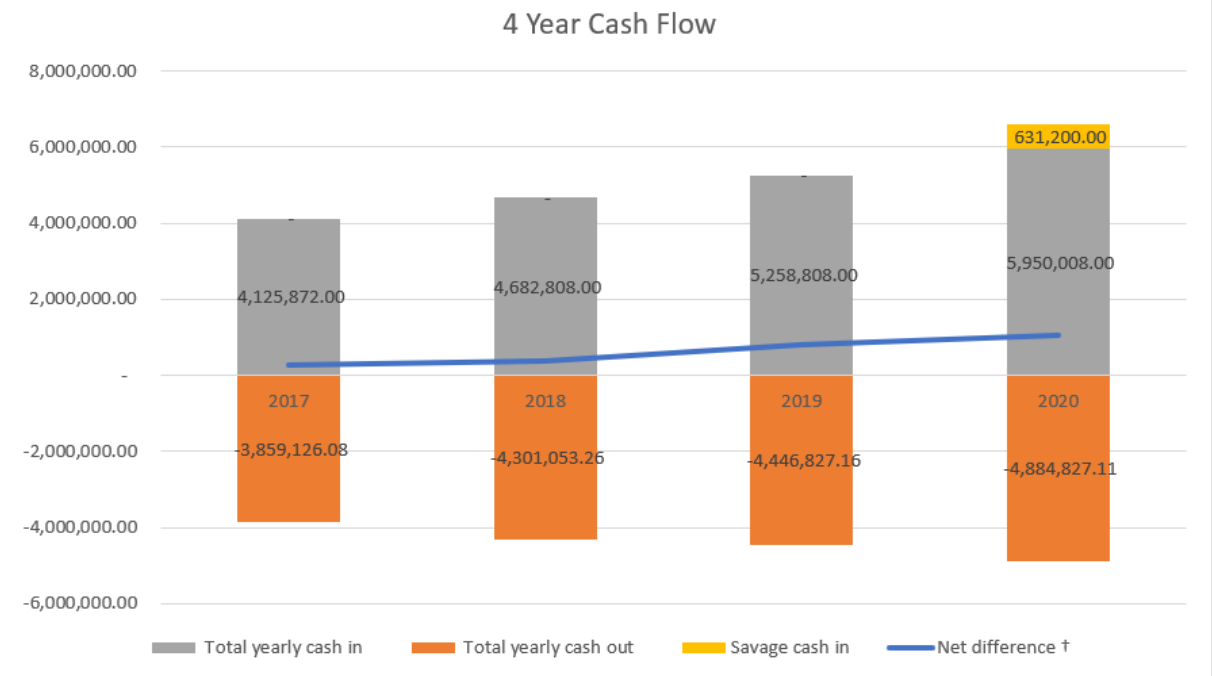


Support expense	-	-	-		-
Total Selling expense	280,187.00	468,280.00	525,880.00	595,000.00	1,869,347.00
Depreciation	65,550.00	65,550.00	65,550.00	65,550.00	
Total Depreciation	65,550.00	65,550.00	65,550.00	65,550.00	262,200.00
Supplies expenses	-	-	-		
Total Supplies expenses	-	-	-		-
Other expense					
Other expense	252,000.00	252,000.00	252,000.00	252,000.00	
Principal Loan repayments	262,959.00	262,959.00	-		
Tax expense	-	166900.38	270660	355060.03	
Total Other Expenses	514,959.00	681,859.38	522,660.00	607,060.03	2,326,538.41
Total yearly cash out	3,859,126.08	4,301,053.26	4,446,827.16	4,884,827.11	17,491,833.61
Net difference †	266745.92	381754.74	811980.84	1065180.89	
Cash balance at the end of each year ‡	266,745.92	648,500.66	1,460,481.50	2,525,662.39	
NPV	2342606				
IRR	33%				
Notes:					
* You may wish to write in the names of the months under the numbers to keep track. 'Month one' is the month you start the business.					
† Net difference shows if more cash came in, than went out, or vice versa; and how much.					
‡ To get the cash balance (last row), add or subtract the Net difference from the Cash balance at the start of the month (top row). This figure becomes the next month's new cash balance.					



* The discount rate of NPV is 2.5%, according to the latest federal discount rate in the U.S..

➤ 4-year projected cash flow diagram



❖ Break-even Analysis

break-even cart (First year)	
Fixed cost	amont
Development Cost	617400
Operating expense and Administrative expense:	
Salary	720000
Five insurance and housing fund	733030.08
Selling expense	350234
Depreciation	65550
Loan interest	19071
Other expense	252000
Total fixed cost	2757285.08
Variable Costs per Unit of Production	1412000
Selling Price Per Unit of Production	4202808

note:

公式: $BEP = TFC / (SUP - VCUP)$

BEP = 收支平衡点 (Break-even Point)

总备注: 计算的是软件开发完成后的 BEP, 所以 VCUP, SUP, 以及 TFC 中的一部分值和损益表中不同, 因为损益表的第一年是包含 4 个月软件开发的, 没有收入。选取的时间点是第五个月, 比如一年的单位产品价格等于第五个月的单位产品价格乘以 12, TFC 中的一些项也是同理, TFC 的项大部分值都和损益表中一年的总和一致, 不同的在下面有说明。有一些值会按规律变化, 比如单位变动成本, 比如利息, 不是单纯乘以 12, 但是一年的总值是可以计算的, 然后以年为单位算出 BEP

TFC = 总固定成本 (Total Fixed Costs) The selling expense is different from the value in profit projection *because the 4 month selling expense (advertising expense) during development is 0, after development it's value won't be 0*

VCUP = 单位变动成本 (Variable Costs per Unit of Production) The cost of service of a year after the software is developed,

SUP = 单位产品价格 (Selling Price Per Unit of Production) The revenues of a year after the software is developed

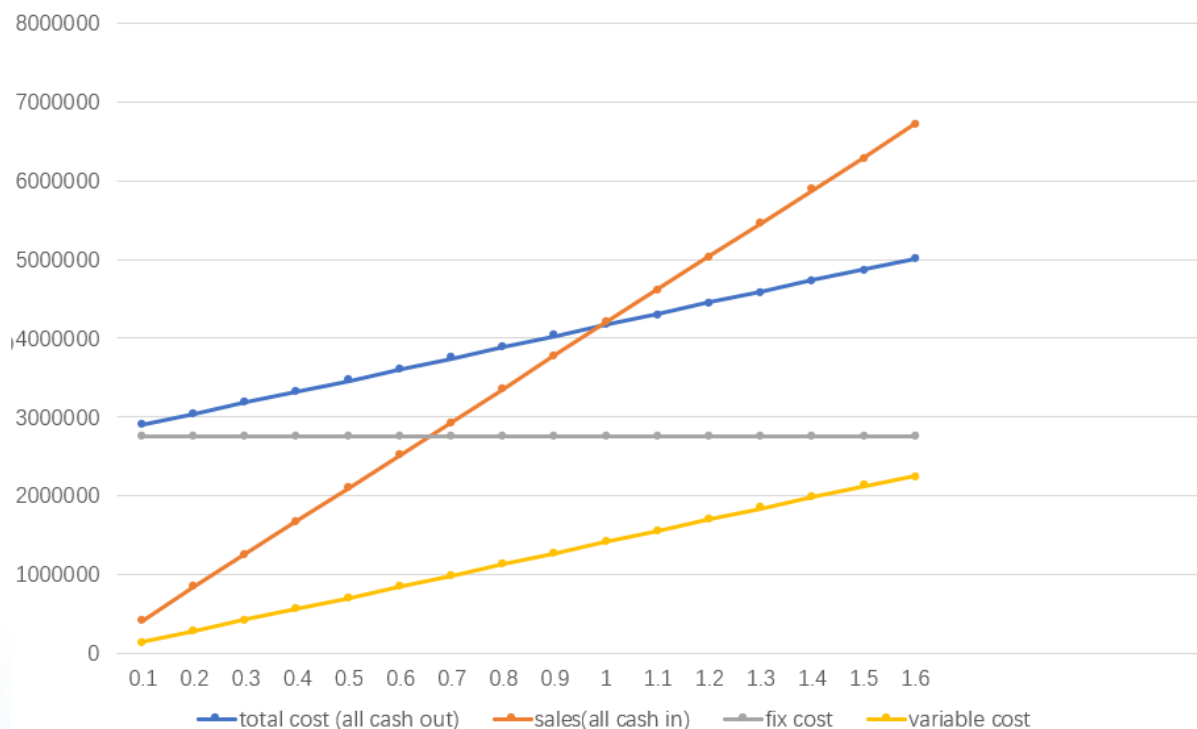
$TFC = 2757285.08$

$VCUP = 111000 \times 8 + 131000 \times 4 = 1412000$

$SUP = 350234 \times 12 = 4202808$

$BEP = TFC / (SUP - VCUP) = 2757285.08 / (4202808 - 1412000)$
 $= 0.988 \text{ year}$

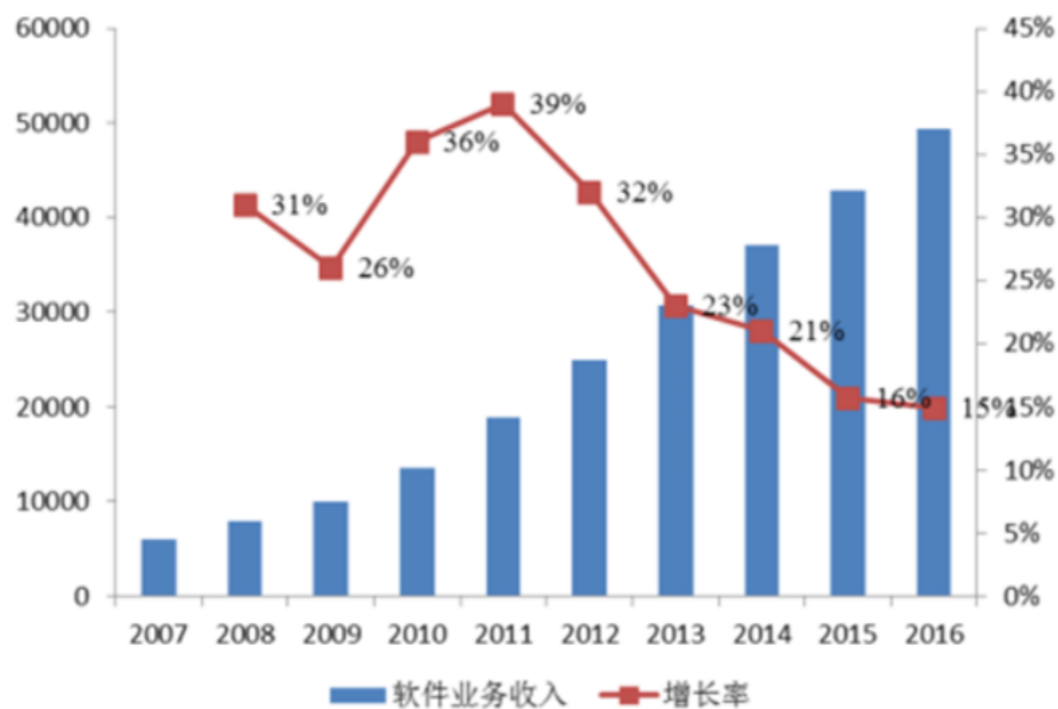
Break even diagram(First year)



VI. Supplement

❖ 2006-2017 China's software business income and growth

2007 年-2016 年我国软件业务收入及增长情况:



❖ Five insurance and housing fund

缴纳项目	个人缴费比例%	单位缴费比例%
养老保险	8%	20%
医疗保险	2%	6-10%
失业保险	0.5-1%	1.50%
工伤保险		0.5-1.2%
生育保险		0.80%
公积金	10-12%	10-12%

❖ Other Assumptions

1. Revenues :

reduced human costs($8 \times 6000 + 3 \times 8000 + 3 \times 5000 + 2292 \times 8 + 3056 \times 3 + 3 \times 1910 = 120234$)

increased sales(200000)

phone costs(30000)

2. costs of goods sold:

Labour costs + Subcontracting + Project team and office costs + training

3. costs of service sold:

operating and maintenance people salary 6×12000 涨

water + electric 5000/月

counter people 2×6000

dispatcher 2×8000 /月

extra transportation cost 6000/月

modify 2w/3月

4. salary:

2 customers service 5000/月

manager 2w/月

5 sellers 6000/月

5. Selling expense:

10% Revenues

6. Depreciation:

soft+hard+net

7. other expense: 21000/月

❖ Interest

期数	月供	月供本金	月供利息	本金余额
1	21913.31	19871.65	2041.67	480128.36
2	21913.31	19952.79	1960.52	460175.57
3	21913.31	20034.26	1879.05	440141.31
4	21913.31	20116.07	1797.24	420025.25
5	21913.31	20198.21	1715.10	399827.04
6	21913.31	20280.69	1632.63	379546.36
7	21913.31	20363.50	1549.81	359182.86
8	21913.31	20446.65	1466.66	338736.22
9	21913.31	20530.14	1383.17	318206.08
10	21913.31	20613.97	1299.34	297592.11
11	21913.31	20698.15	1215.17	276893.97
12	21913.31	20782.66	1130.65	256111.31
13	21913.31	20867.53	1045.79	235243.79
14	21913.31	20952.74	960.58	214291.06
15	21913.31	21038.29	875.02	193252.77
16	21913.31	21124.20	789.12	172128.58
17	21913.31	21210.46	702.86	150918.13
18	21913.31	21297.07	616.25	129621.07
19	21913.31	21384.03	529.29	108237.04
20	21913.31	21471.35	441.97	86765.70
21	21913.31	21559.02	354.29	65206.68
22	21913.31	21647.05	266.26	43559.64
23	21913.31	21735.45	177.87	21824.19
24	21913.31	21824.20	89.12	00.00
总计	525919.43	500000.00	25919.43	---