



2021-22 IMA CASE COMPETITION

Fun Sports Co. Inventory Management Practice

The Wave
HD20211718

4.30 Inter-department Meeting

**Department of purchasing, inventory and logistic
Department of Research and Development**

Delegate Attending

Interdepartmental Meeting – HORIZONTAL COMMUNICATION



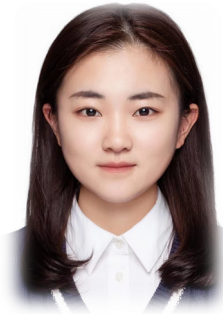
Inventory Manager

Department of purchasing, inventory and logistic

Cathy Yan SHI



200013



Purchase Manager

Department of purchasing, inventory and logistic

Eland Di WU



200017



IT Manager

Department of research and development

Derek Kehan LIN



200011



Research Manager

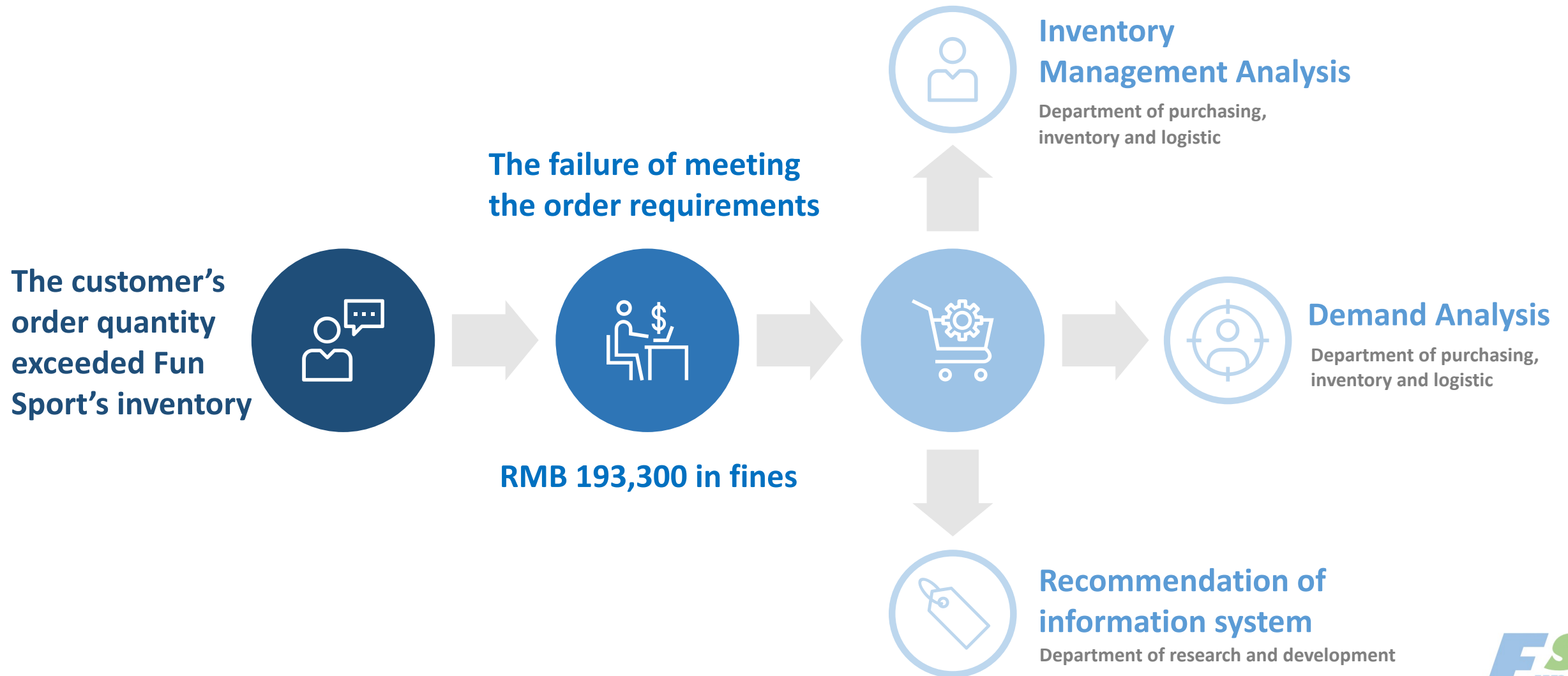
Department of research and development

Calvin Xinyu SHEN



200015

Executive Summary



Problems in Inventory management And Solutions (1)

1-1

Discover Problems



Deduce Reasons



Explore Solutions

- *No OEM inventory count and quality control procedure*
- *Lacks smooth information communication with OEMs*

- *Information gap*
- *Inefficient relationship with OEMs*

Certified Partnership Scheme

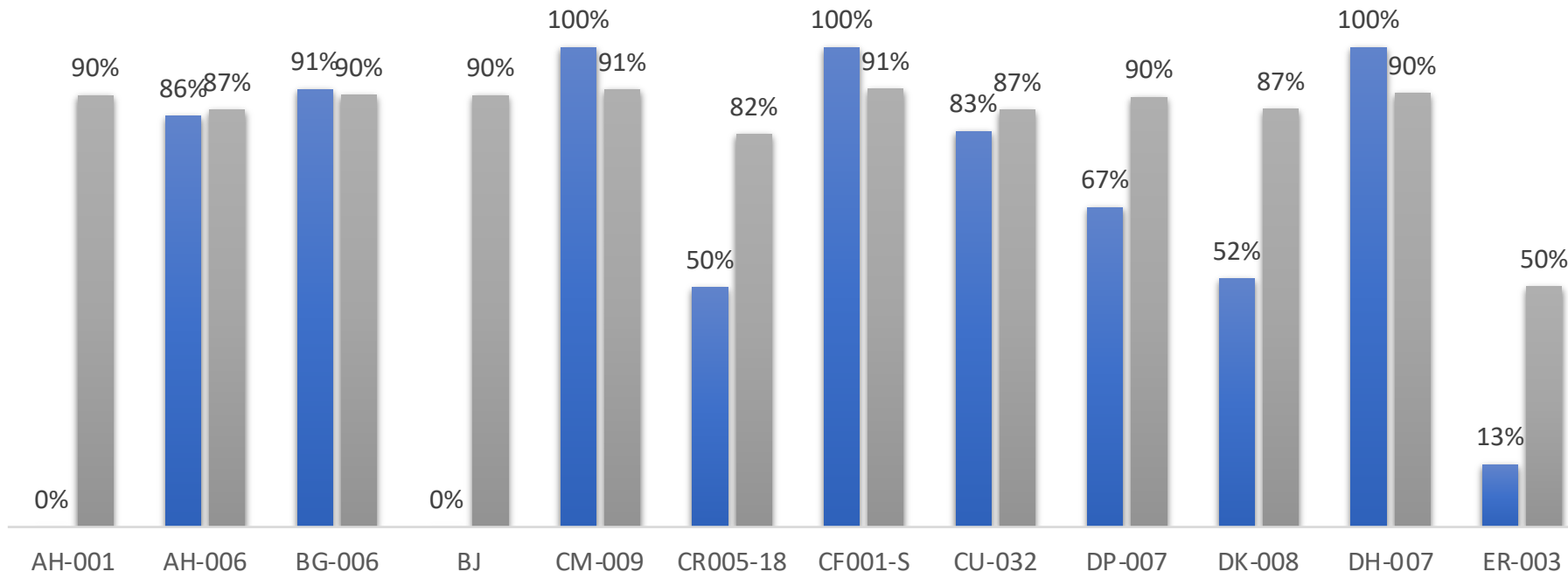
Detailed Solution I: Managing the Relationship With OEMs

1-2

Quality Problem of The Products Produced by The OEMs

Proportion of returning for quality problem

■ Exclude the 7-day return ■ Include the 7-day return (90% is for quality problems)



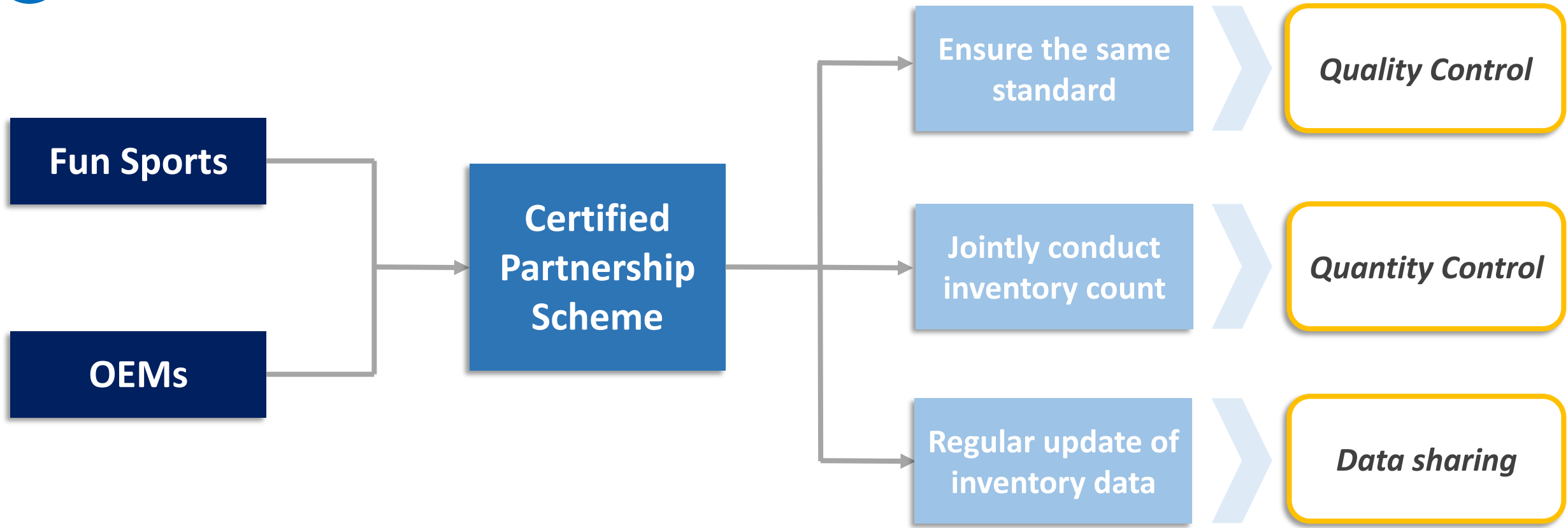
Refer to the in-person communication, we assume 90% of the 7-day No Reason Return is for quality problem

Detailed Solution I: Managing the Relationship With OEMs

1-3



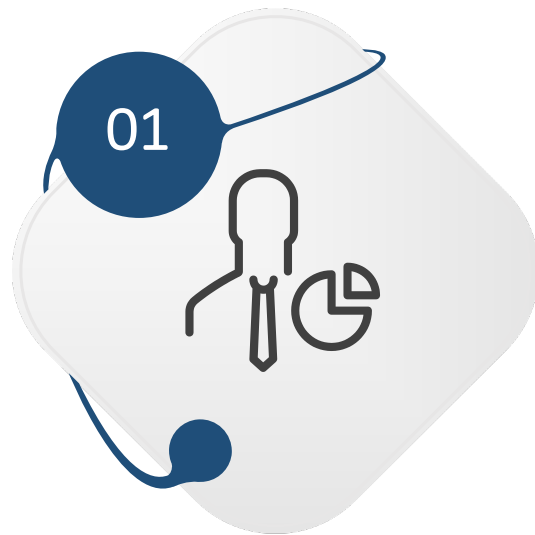
Flowchart of Certified Partnership Scheme



Detailed Solution I: Managing the Relationship With OEMs

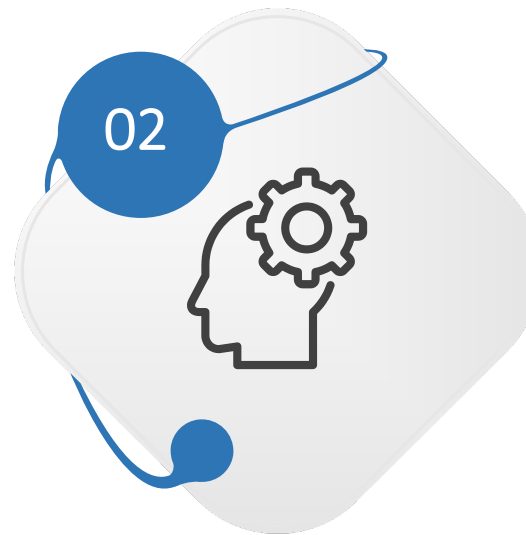
1-4

SAF Analysis of Certified Partnership Scheme



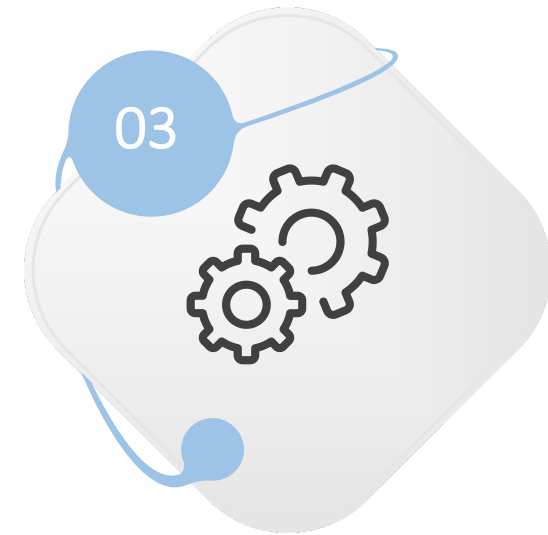
Suitability

- *High dependency on OEM*
- *Competitive Advantage*



Acceptability

- *Better quality control*
- *Prevent financial instability*



Feasibility

- *Supply chain management*
- *Win-win cooperation*

Problems in Inventory management And Solutions (2)

1-5

Discover Problems



Deduce Reasons



Explore Solutions

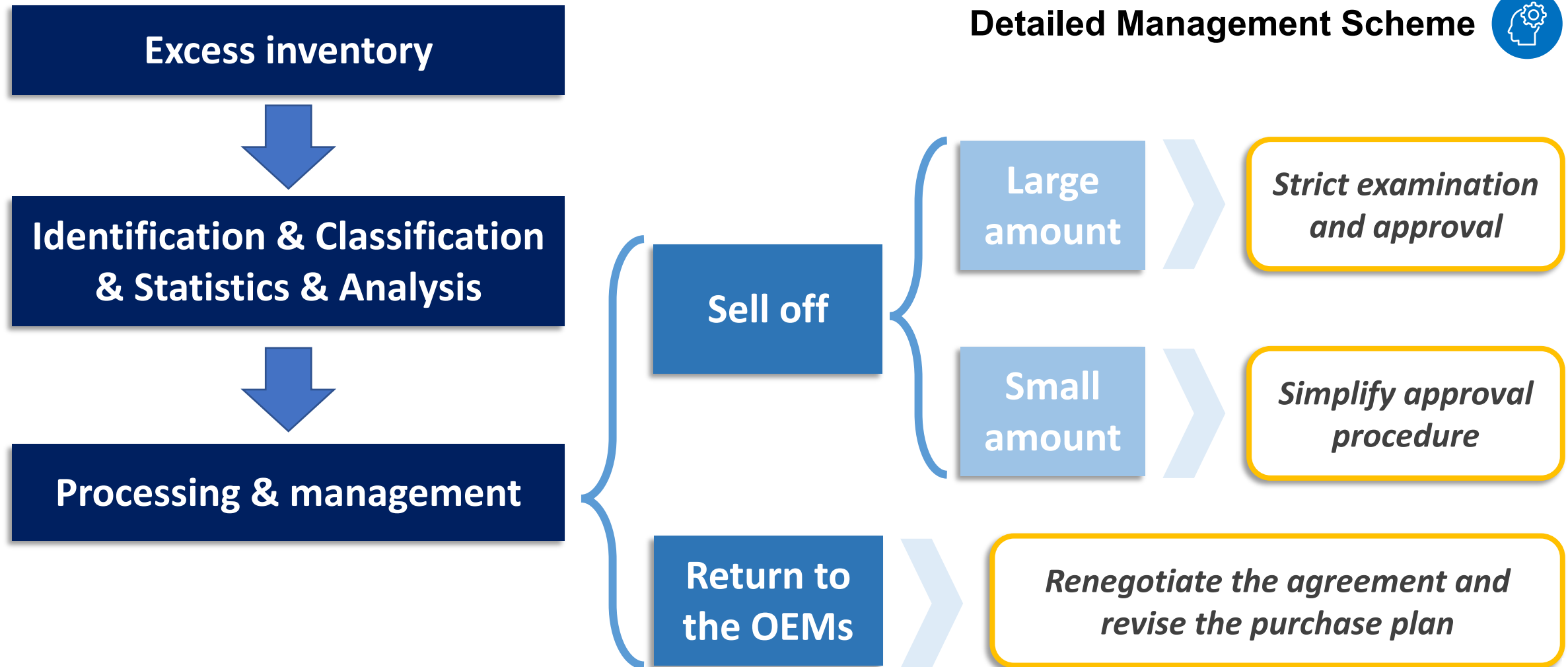
Some products with excess inventory have been long kept due to small storage space occupation.

- *Lack of related scheme on the excess inventory*
- *Negligence of warehouse keepers*

Manage the excess inventory

Detailed Solution II: Managing the Excess Inventory

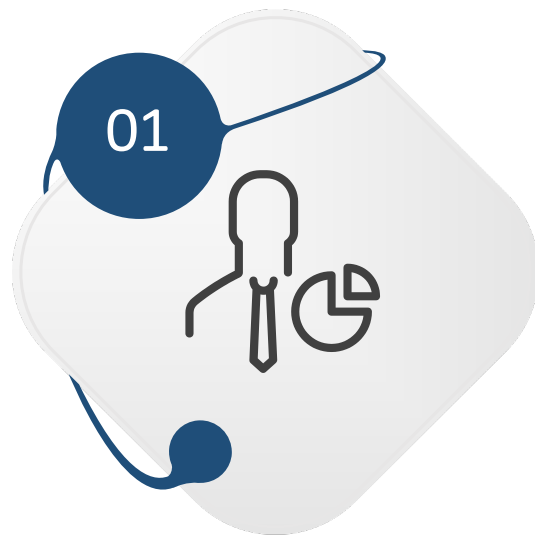
1-6



Detailed Solution II: Managing the Excess Inventory

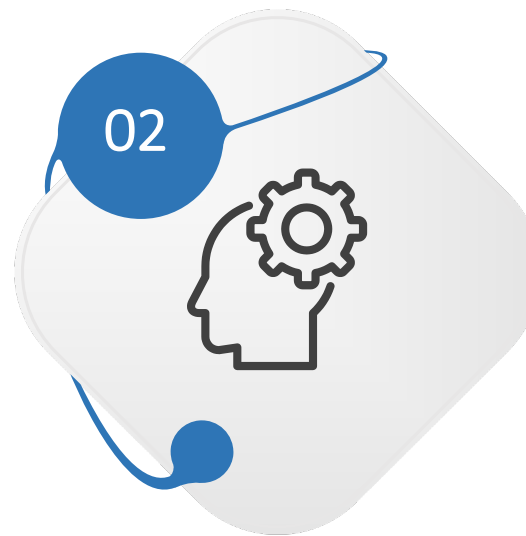
1-7

SAF Analysis of Excess Inventory Management Scheme



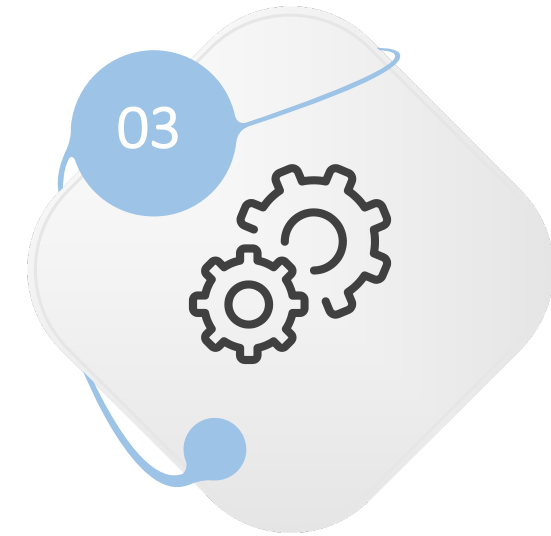
Suitability

- *Limited warehouse capacity*
- *Inventory level utilization*



Acceptability

- *Reduce the stock out risk*
- *Long-run benefits*



Feasibility

- *Easy to negotiate under *CPS*
- *Can be a normal work*

*Certified Partnership Scheme

Problems in Inventory management And Solutions (3)

1-8

Discover Problems



Deduce Reasons



Explore Solutions

The inventory information about our own warehouses and those of our OEMs cannot be shared in real-time.

The information system is outmoded and not suitable.

*Adapt a new information system that best suits the business.
(See the details in 2-2-4)*

Problems in Inventory management And Solutions (4)

1-9

Discover Problems



Deduce Reasons



Explore Solutions

- *Ineffective Return and Exchange procedures*
- *Poorly managed Inbound operations*
- *Warehouse receiving and delivering processes*
- *Insufficient training and monitoring*
- *Outmoded inventory recording system*
- *Information system (See the details in 2-2-5)*
- *Training of warehouse keeper*
- *Reward and Punishment Scheme*

FS's Functional Needs for The Information System

2-1-1

1 Internal Needs (FS Company itself)

Information Synchronization

Information Exchange

Inventory Count (e.g.repeated return)

Management Plan Adjustment

2 External Needs (With the OEMs)

Certificate of returned inventory

Data sharing with the OEMs

OEM Inventory Count

Quality control of children's products

Current Information System in The Market

2-2-1



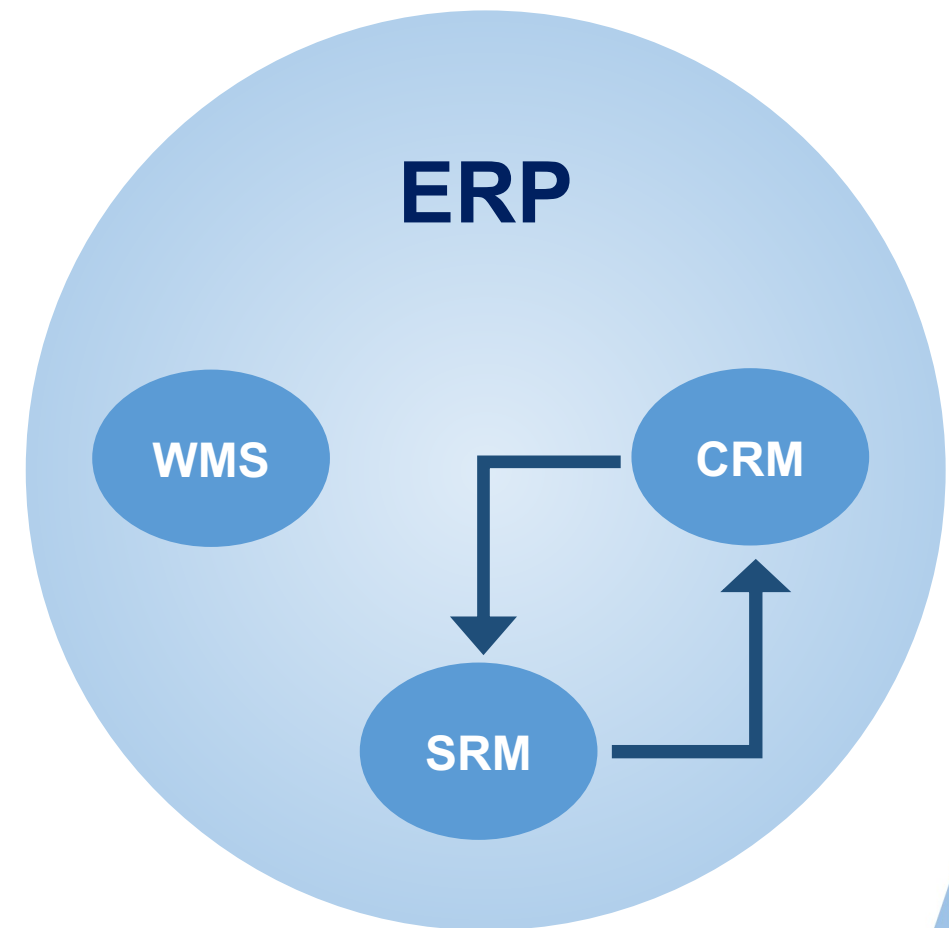
Enterprise Resource Plan (ERP)

2-2-2

1 Functions of ERP System



2 Relations of The Systems We Introduce



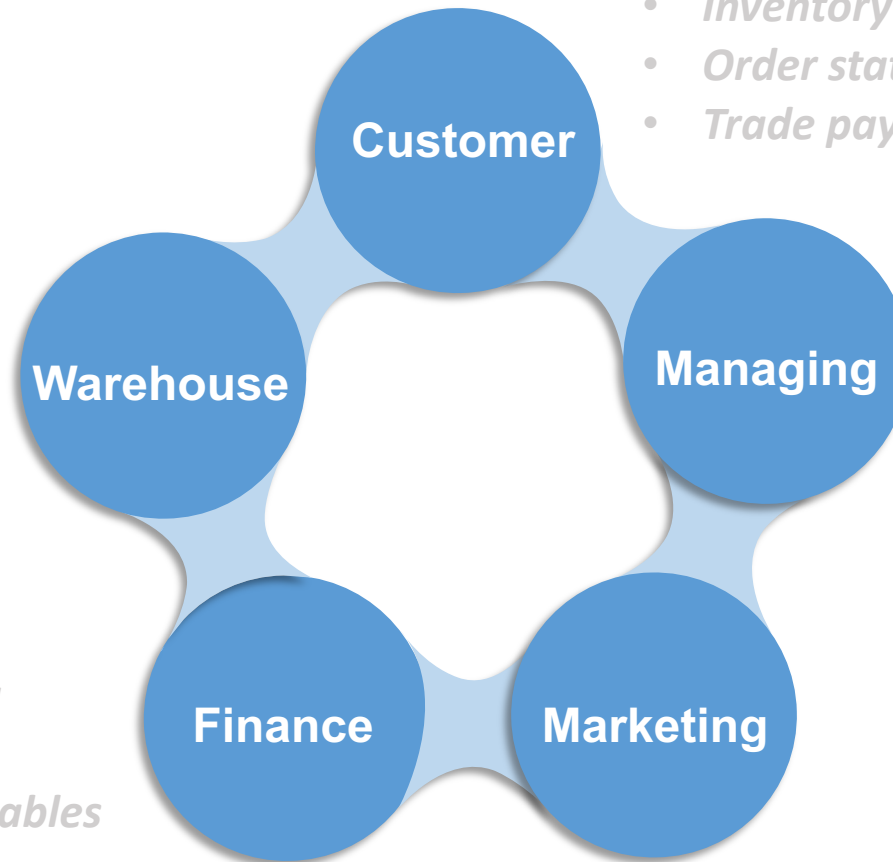
Warehouse Management System (WMS)

2-2-3

1 Functions of WMS System

- *Shelf management*
- *Inventory management*
- *Outbound information*
- *Return goods management*
- *Inventory count*
- *Code management*
-

- *Expenses*
- *Bill collecting*
- *Payment*
- *Age of receivables*



- *Inbound and outbound*
- *Inventory status*
- *Order status*
- *Trade payables*

- *Control*
- *Report*
- *Decision-making*
- *Develop*

- *Order receiving*
- *Inbound and outbound*
- *Inventory status*
- *Order status*

Supplier Relationship Management Synergy (SRM)

2-2-4

1 Functions of SRM Synergy System



Settle the Problem (3) in 1-9

- | | |
|---------------------------|------------------------------|
| Supplier (OEM) management | Shipping Synergy |
| Purchasing management | Quality synergy |
| Inquiry management | Inventory synergy management |
| Bidding management | Financial synergy |
| Contract management | Outsourced production |
| Order synergy | Performance Management |

2 Supplied Goods Management Module

- Supplier management
 - Supplier registration
 - Supplier access
 - Supplier qualification file
 - Supplier Access Regulations
 - Supplier Contact
 - Supplied goods management
 - Supplier supply sample management

Supplier full name

OEM-1

product name

Massage ball

Product number

AH-006

product type

finished product

3 Outsourced Production Module

- Outsourced production
 - Outsourcing Picking List
 - Outsourcing production report form
 - External Statistical Analysis (External)

***Outsourcing order**

select data

Purchase order number

no content yet

Supplier Relationship Management (SRM)

2-2-5

4 Inventory Synergy Management Module

| |
|---|
| *Inbound warehouse |
| <input type="text"/> |
| *Outbound warehouse |
| <input type="text"/> |
| *Inventory method selection |
| <input type="radio"/> Scan the code for storage |
| <input type="radio"/> manual entry |

*Managing
inbound and
outbound
operations*

**Settle the Problem
(4) in 1-10**

*Conducting
inventory count
(FS & the OEMs)*

Detailed scheme in 1-3

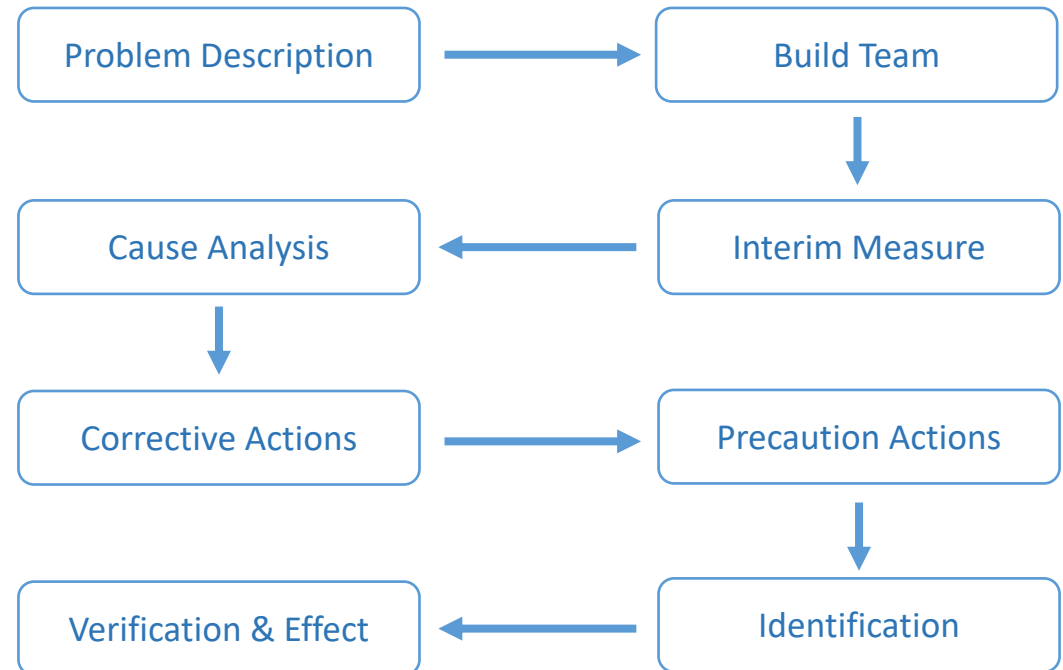
| | | | | |
|----------------------|----------------|----------------|----------------------|-----------------|
| *inventory warehouse | | | | |
| <input type="text"/> | | | | |
| unit | storehouse | in stock | * Counting quantity | Profit and loss |
| no content yet | no content yet | no content yet | <input type="text"/> | no content yet |

5 Quality Synergy Module

Quality control of children's product

Meet with the External Needs in 2-1-1

8D Improvement Report



Customer Relationship Management (CRM)

2-2-6

1 Functions of CRM System



2 Benefits Fun Sports Will Enjoy



Customer Stickiness



Product Upgrading



After-sales Services

System Simulation: Customer Relationship System (CRM)

2-2-7



Assumptions: Customer Source

- Using the data from **Appendix 2**
- Assuming all the products have equal price
- No. of products sold is 100 units in the model

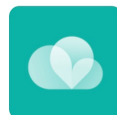
| Customer Source | Revenue from each source % | No. of products sold in the model (unit) |
|-----------------|----------------------------|--|
| T-mall | 82% | 82 |
| JD | 12% | 12 |
| Wechat Mall | 5% | 5 |
| Offline Sales | 1% | 1 |



Assumptions: No. of Goods Return

- Using the data from **Appendix 3**
- Using the arithmetic average of the return rate: **9.91%**
- No. of products sold is 100 units in the model

| Reasons for return | Average return rate | No. of return in the model (unit) |
|------------------------|---------------------|-----------------------------------|
| Return in 7 days | 78.72% | 7 |
| Delivery is not timely | 5.04% | 1 |
| Quality | 14.88% | 1 |
| Courier | 1.36% | 1 |



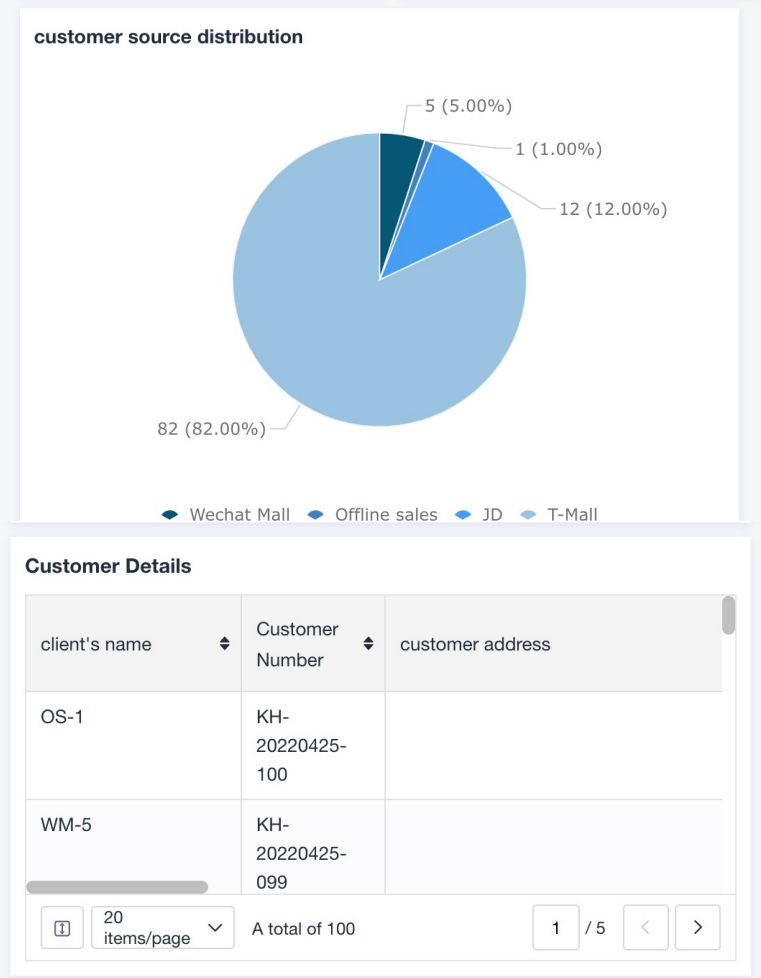
Using Jiandao Cloud
to Simulate

System Simulation: Customer Relationship System (CRM)

2-2-8



Result: Customer Info.



Result: Return Process (e.g., Repeated Return)

+ Add to

import

export

delete

Batch Edit

export attachment

print QR

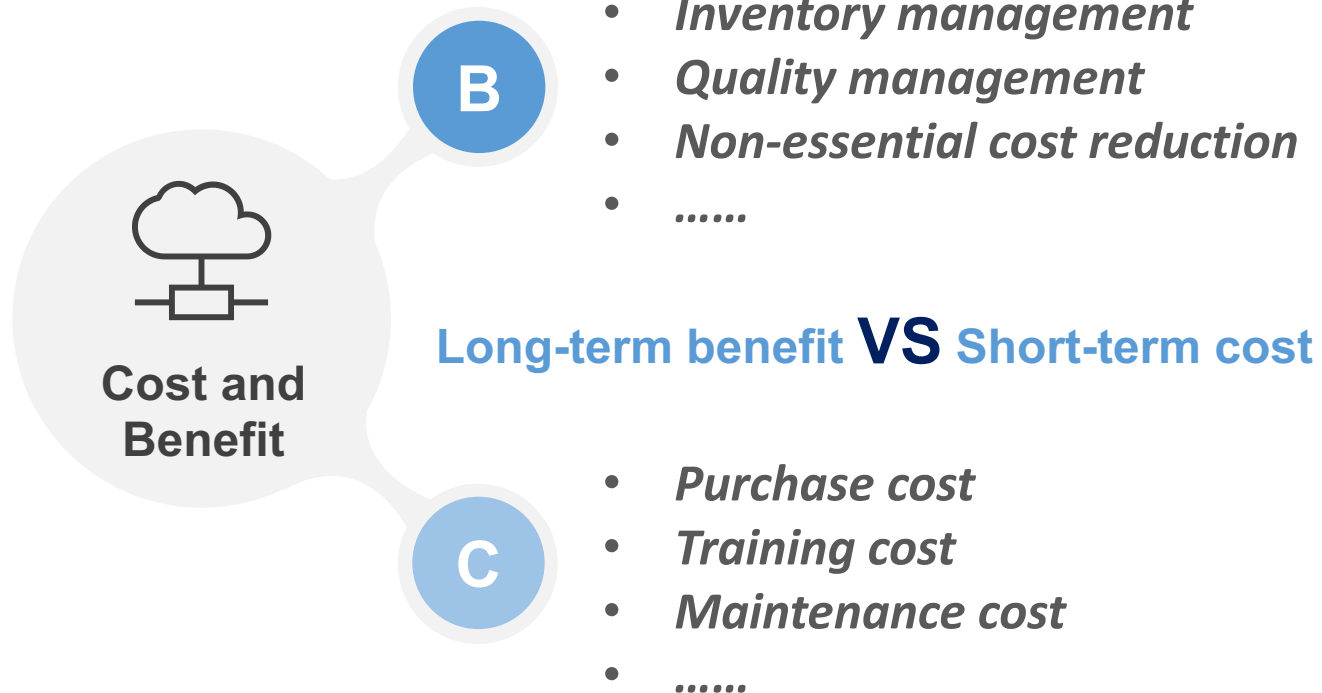
| <input type="checkbox"/> | customer name - primary key ↑ | Contract Order Number - Primary Key ↑ | reasons for return ↑ | Return amount ↓ | return date ↓ |
|--------------------------|-------------------------------|---------------------------------------|-------------------------|-----------------|---------------|
| <input type="checkbox"/> | JD-1 | 20200667 | Quality | 799 | 2020-04-01 |
| <input type="checkbox"/> | JD-12 | 20202873 | Return in 7 days wit... | 799 | 2020-04-01 |
| <input type="checkbox"/> | JD-7 | 20200212 | Courier | 799 | 2020-03-01 |
| <input type="checkbox"/> | OS-1 | 20209333 | Return in 7 days wit... | 799 | 2020-04-01 |
| <input type="checkbox"/> | TM-57 | 20200208 | Quality | 799 | 2022-03-31 |
| <input type="checkbox"/> | TM-57 (repeated return) | 20200208 | Quality | 799 | 2020-04-17 |
| <input type="checkbox"/> | TM-65 | 20200654 | Delivery is not timely | 799 | 2020-03-24 |
| <input type="checkbox"/> | TM-76 | 20200235 | Return in 7 days wit... | 799 | 2020-03-24 |
| <input type="checkbox"/> | TM-78 | 20200763 | Return in 7 days wit... | 799 | 2020-03-24 |
| <input type="checkbox"/> | TM-81 | 20200345 | Return in 7 days wit... | 799 | 2020-03-24 |
| <input type="checkbox"/> | TM-82 | 20200245 | Return in 7 days wit... | 799 | 2020-03-24 |
| <input type="checkbox"/> | WM-5 | 20200231 | Return in 7 days wit... | 799 | 2020-02-27 |

Manage the repeated return

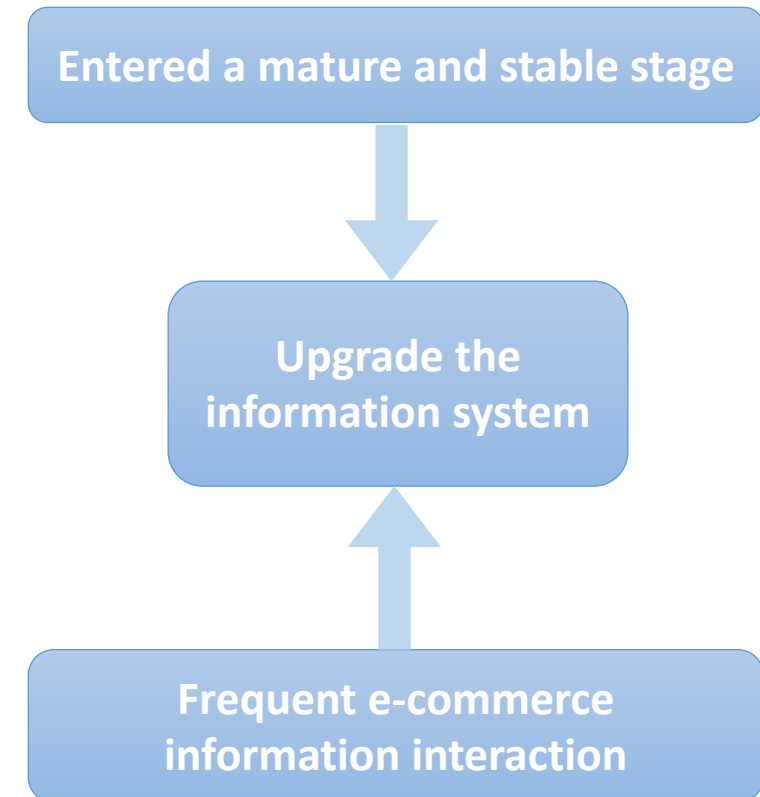
Feasibility & Necessity Analysis

2-2-9

1 Feasibility Analysis



2 Necessity Analysis



Major Plans for Information System Purchase

2-2-10



P.S. It is a SAAS Model, that is, Software-as-a-Service, which stands for the future trend.

Comparison of Purchase Cost (Market Research)

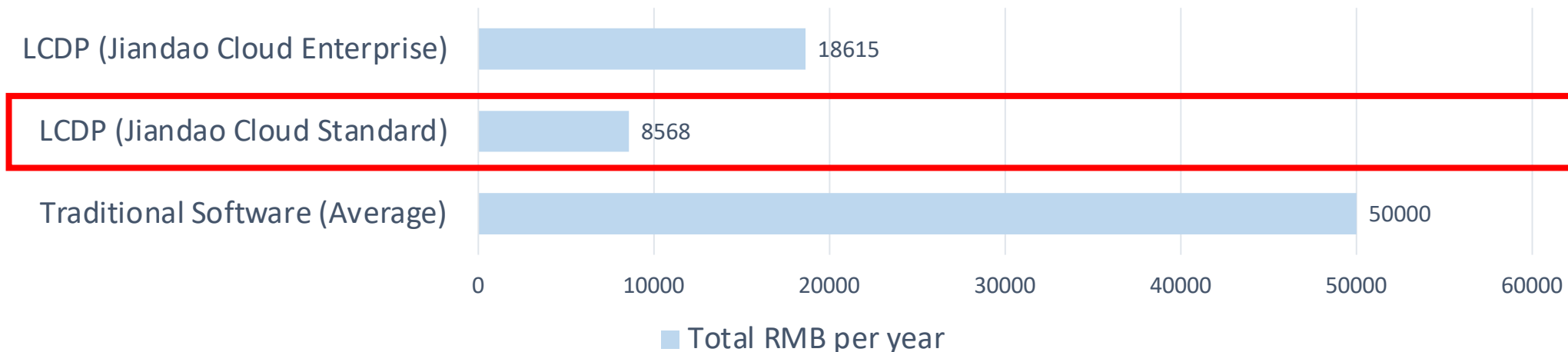
2-2-11

1 Purchase Cost of Jiandao Cloud

| | Free Version | Standard Version | Enterprise Version |
|---------------------------------------|------------------|------------------|--------------------|
| Cost (RMB/people/year) | 0 | 168 | 365 |
| User number | 50 | From 30 | From 30 |
| Enterprise interconnection (e.g. OEM) | 0 ✗ | 20 | 40 |

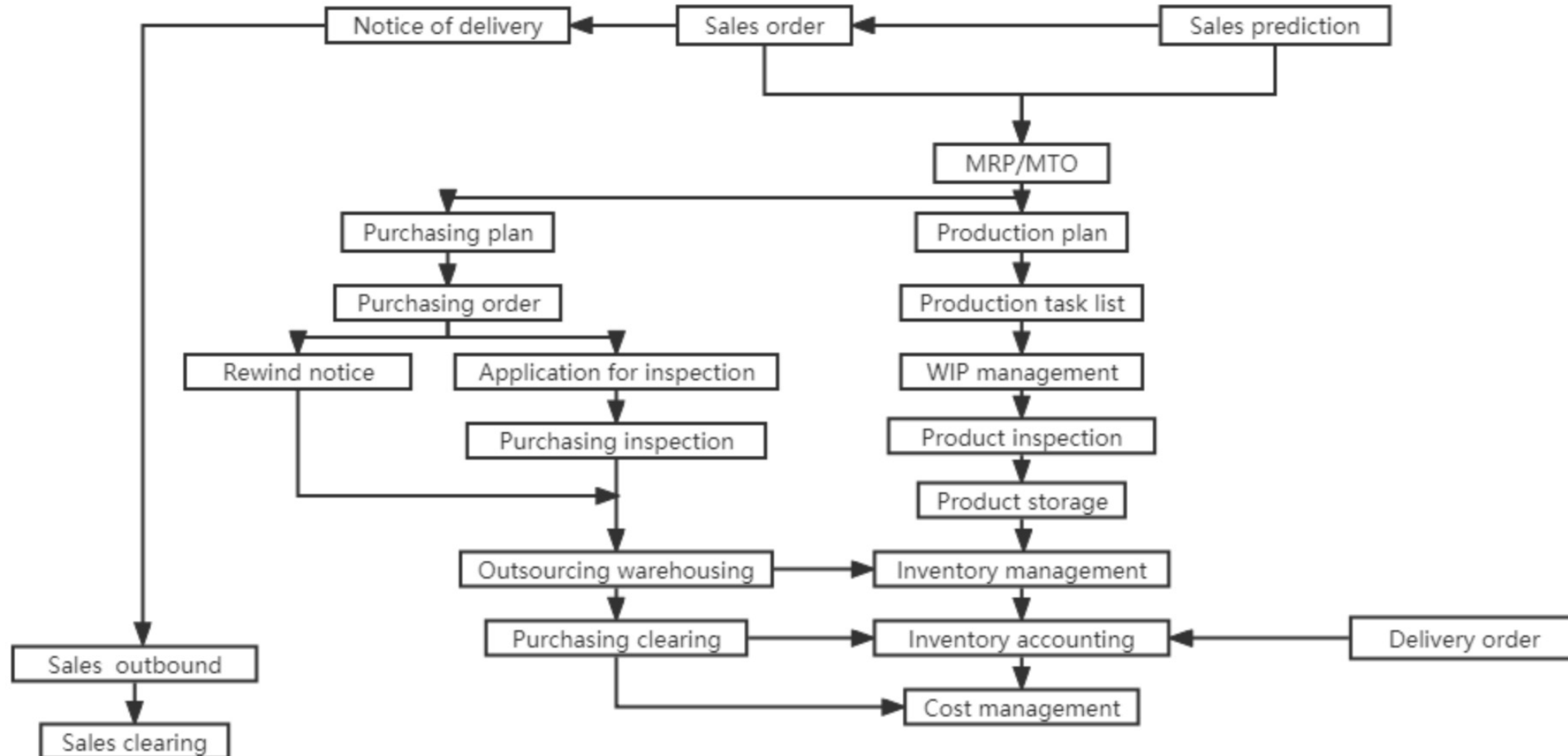
Comparison of Purchase Cost

2



A Customized LCDP ERP System for Fun Sports

2-2-12



Analysis of Transition Scheme

2-2-13

| | Direct transition | Parallel running | Pilot operation | Phased transition |
|-----------------|--|--|---|--|
| Features | <i>Existing system is completely replaced by the new system</i> | <i>Running the existing system and the new system in parallel for a period</i> | <i>Operating the new system in parallel with the existing system</i> | <i>Transforming subsystem by subsystem</i> |
| Pro. | <ul style="list-style-type: none"> • <i>Quick and low cost</i> • <i>Minimal resources required</i> | <ul style="list-style-type: none"> • <i>Risk reduction</i> • <i>In-time correction of the new system</i> | <ul style="list-style-type: none"> • <i>Safer than direct transition</i> • <i>Less expensive</i> • <i>Minimal resources required</i> • <i>Easy to control</i> | <i>Less risky than direct transition</i> |
| Con. | <ul style="list-style-type: none"> • <i>Higher risk</i> • <i>No backups</i> | <ul style="list-style-type: none"> • <i>Higher cost</i> • <i>Time-consuming</i> • <i>Extra work</i> | <ul style="list-style-type: none"> • <i>Less safe than parallel running</i> • <i>Time-consuming</i> | <i>Time-consuming</i> |



Thanks for Listening