NEW ENERGY

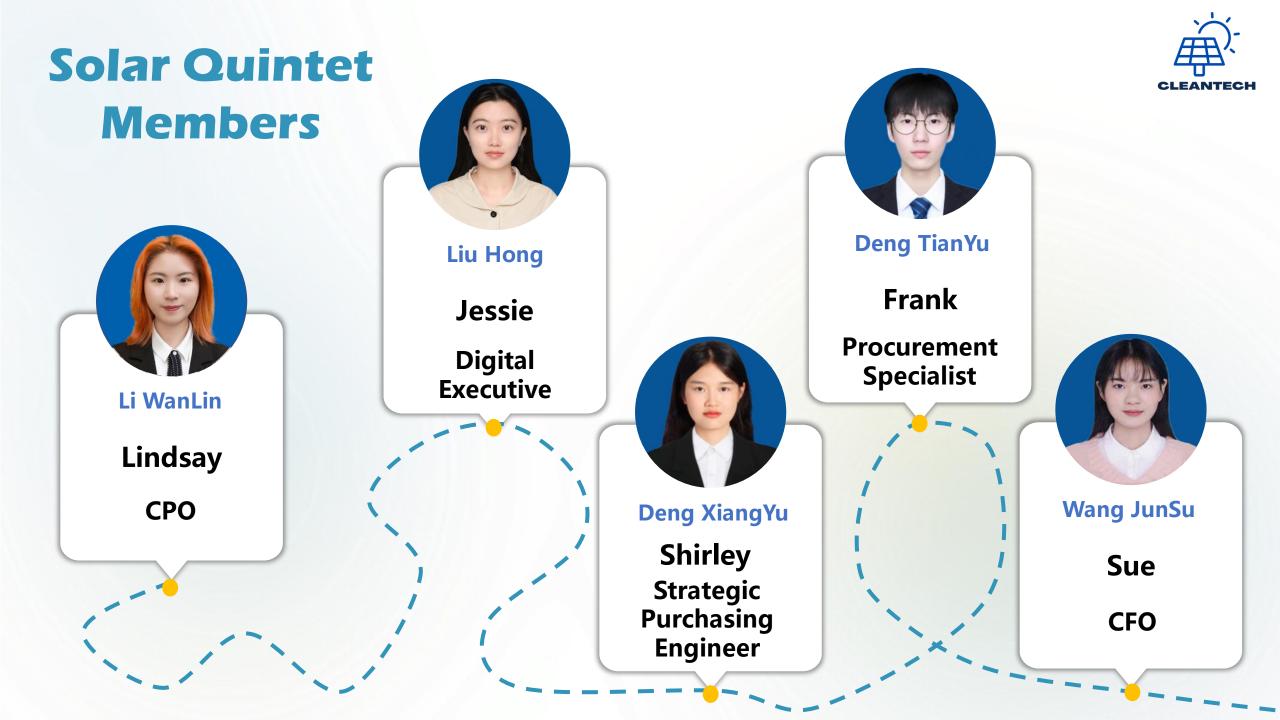
# Break the Obstacles, To be the Finest Business & Procurement Planning of CleanTech Co.

Solar Quintet XN20222409

## **Solar Quintet**







# CONTENT



Our team will analyze the current and future situation of CleanTech , decompose problem

of procurement, then give suggestions according to the following process.



## Mini-Theatre — A Salon Invitation...

The procurement department did not meet the budget target, **what should I do?** I have to invite people from **various departments** to participate in the **procurement strategy salon!** 

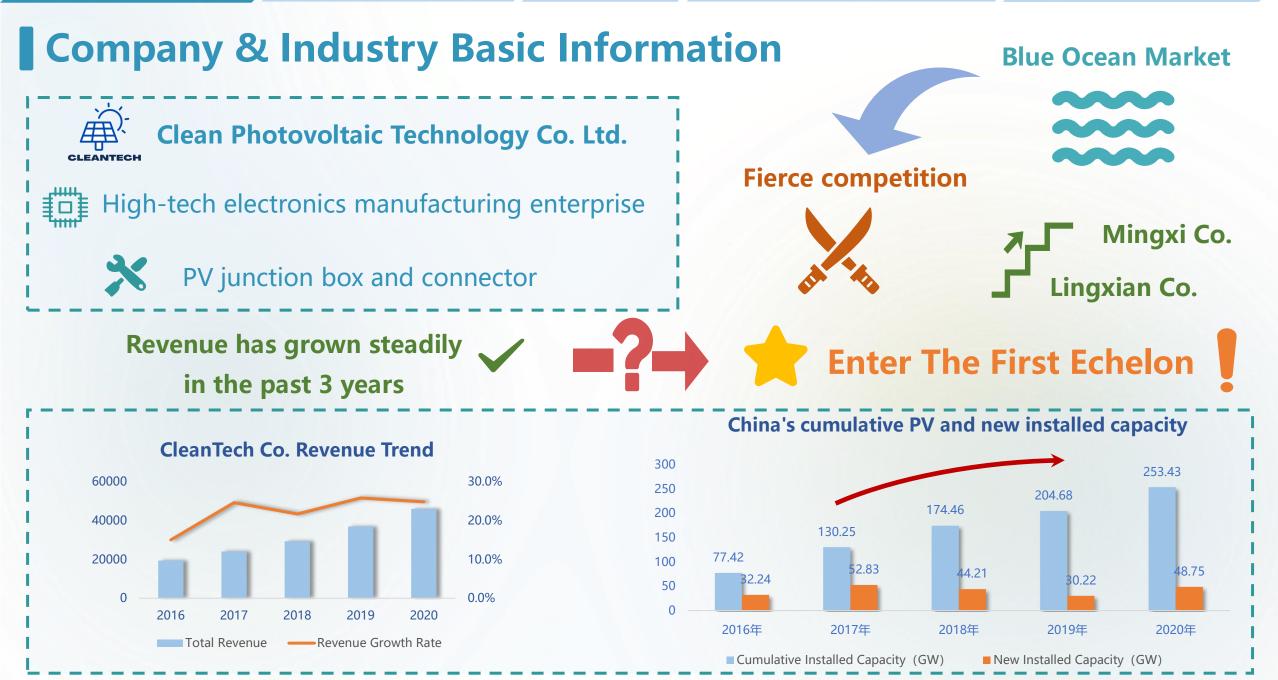






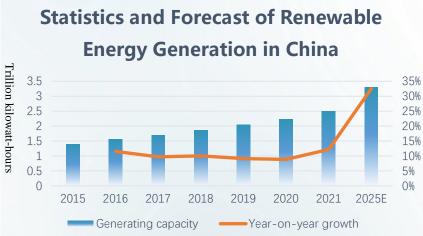
Lindsay CPO

# In The Salon



## Macro Analysis : PEST





#### Political

- Countries develop zero-carbon emission plans.
- The central government no longer subsidizes.
- > The price of raw materials **goes up**.
- Russian-Uzbekistan conflict

#### Economic

- It is estimated that the junction box market will be 18.86 billion by 2025.
- China's industrial electricity consum-ption has increased sharply.
- Affected by the exchange rate, the price of silicon has risen.

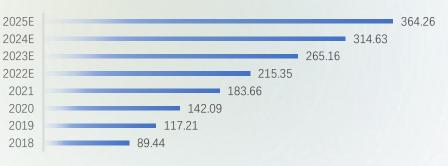
#### Social

- Attach importance to the development of renewable energy.
- People gradually form a healthy concept of consumption.
- Multi-level society needs to provide space for development.

## Technological

- Improvement of safety standards in various countries.
- **Fast iteration** of junction box technology.
- The proportion of global distributed installation is increasing.

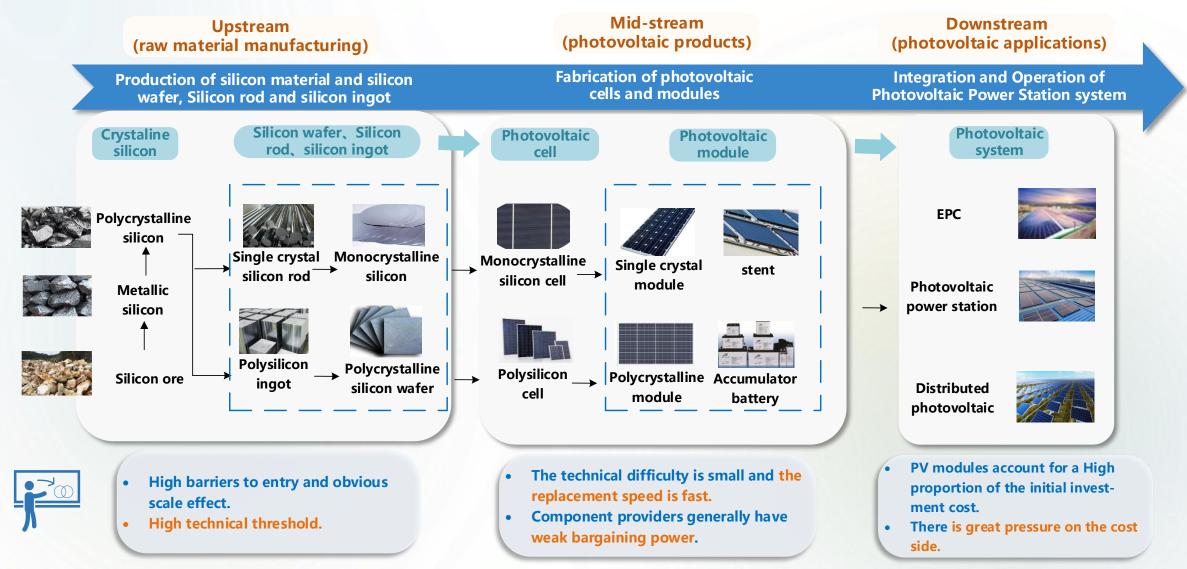
#### TREND FORECAST OF PHOTOVOLTAIC POWER GENERATION IN CHINA



Photovoltaic generation TWh

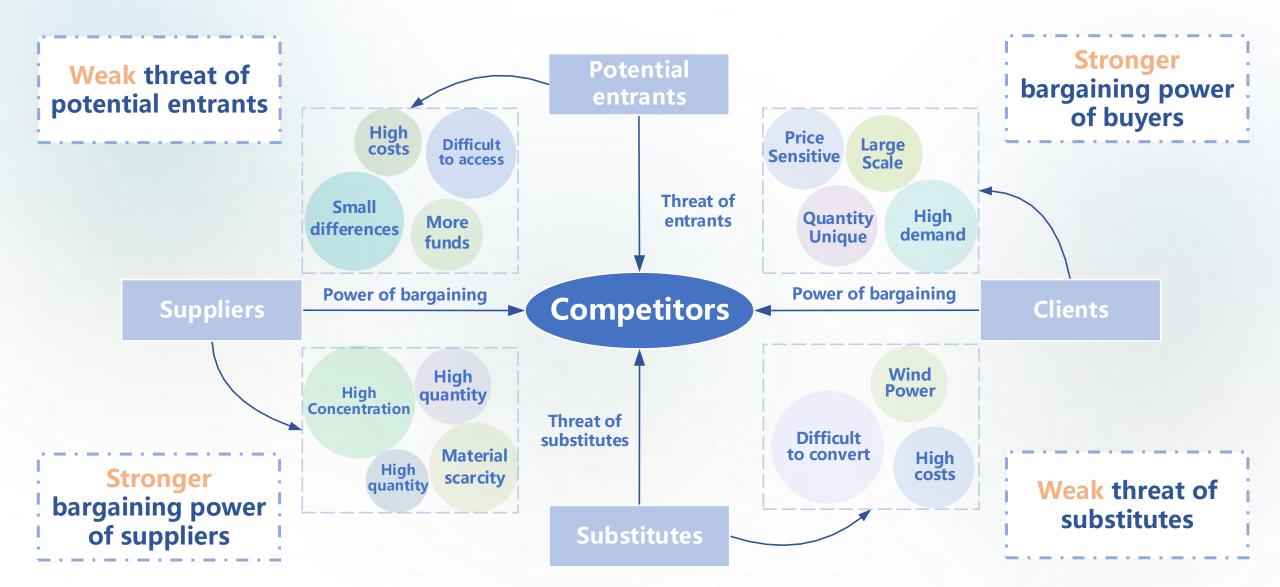
## Meso Analysis: Industry Chain Analysis





## **Micro Analysis: Analysis of Competitive Environment**

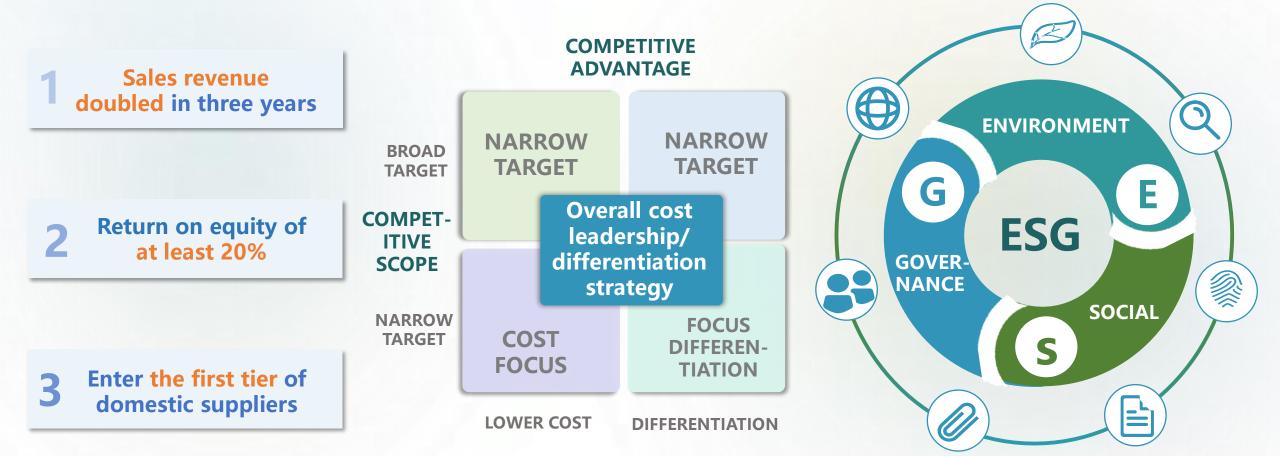




## **Corporate Strategy**



Entered **the first tier** of the supporting production industry of domestic PV module enterprises **Carbon peaking** and **carbon neutrality goals** 

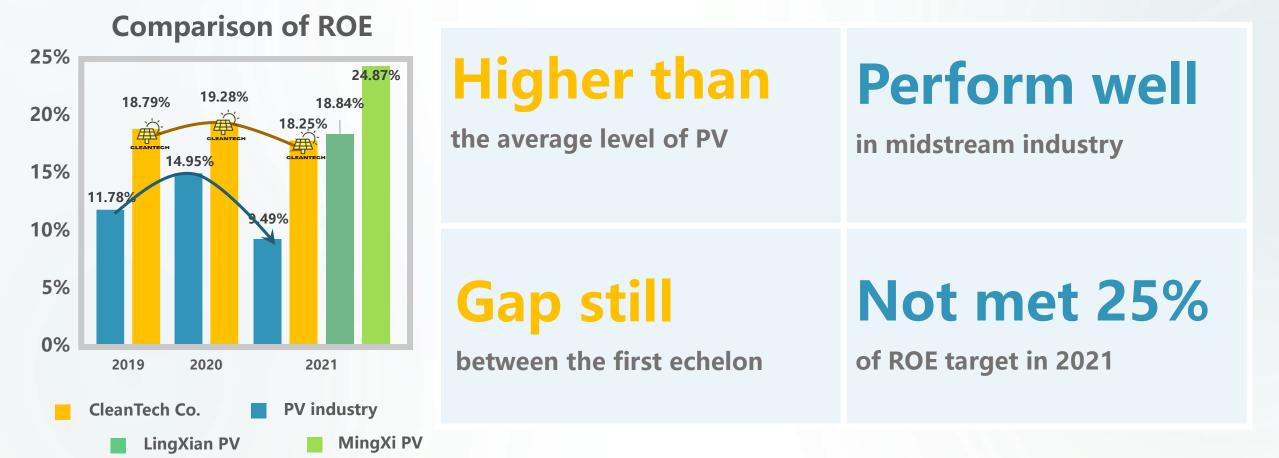


## **Business Analysis**

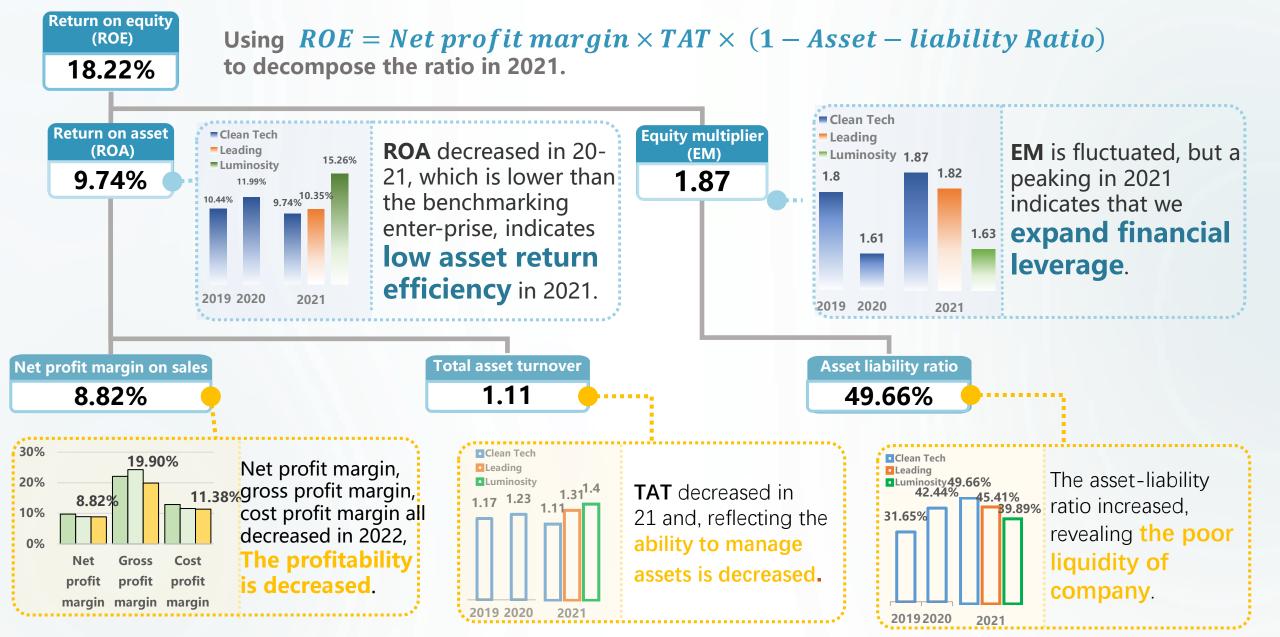
#### We used **DuPont analysis model** to evaluate the performance of the company.

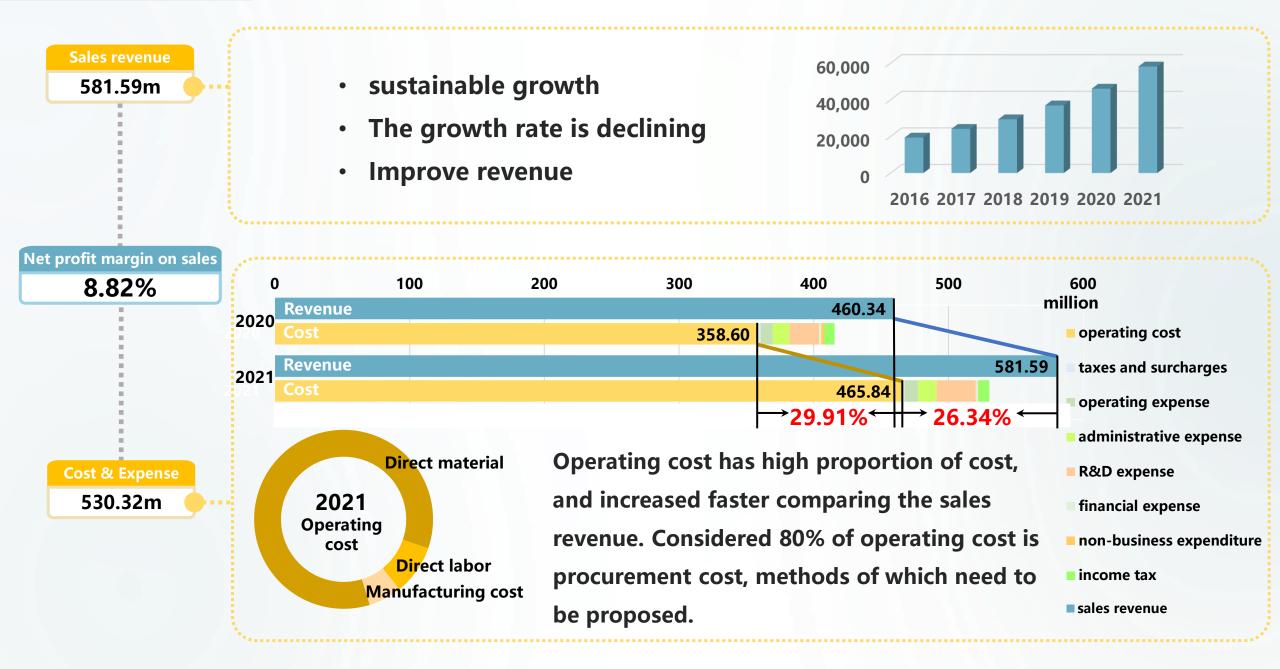
Return on equity (ROE)
18.22%

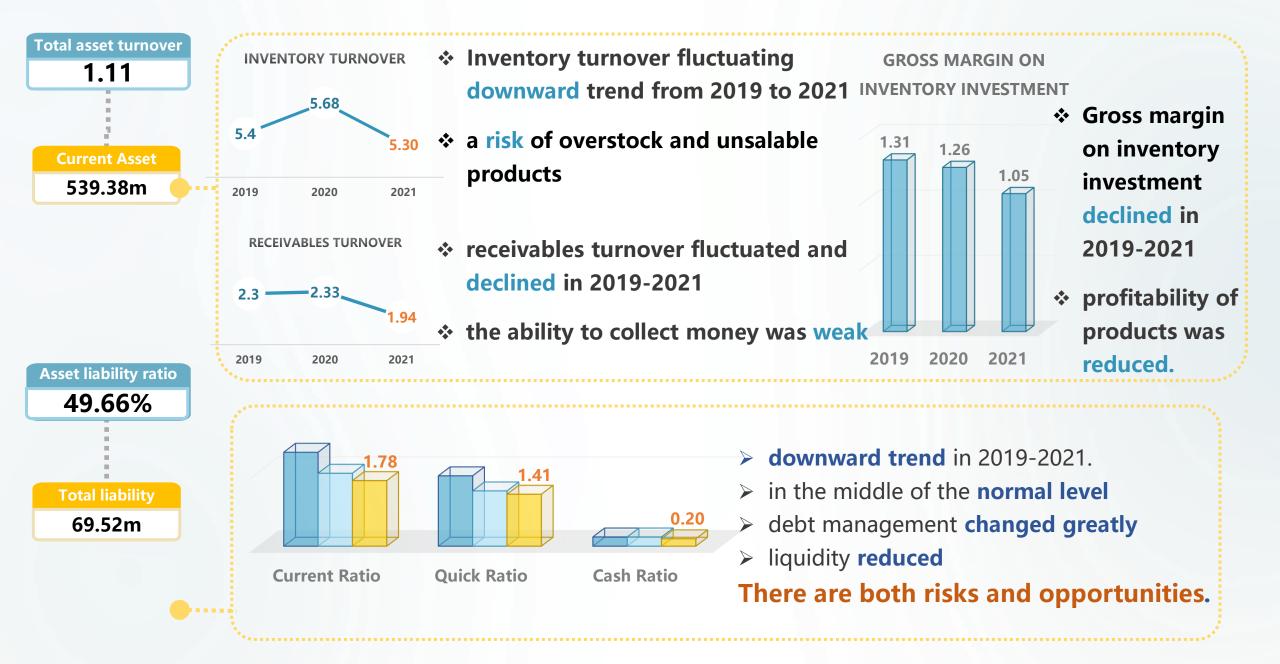
Using  $ROE = Net profit margin \times TAT \times (1 - Asset - liability Ratio)$  to decompose the ratio in 2021.



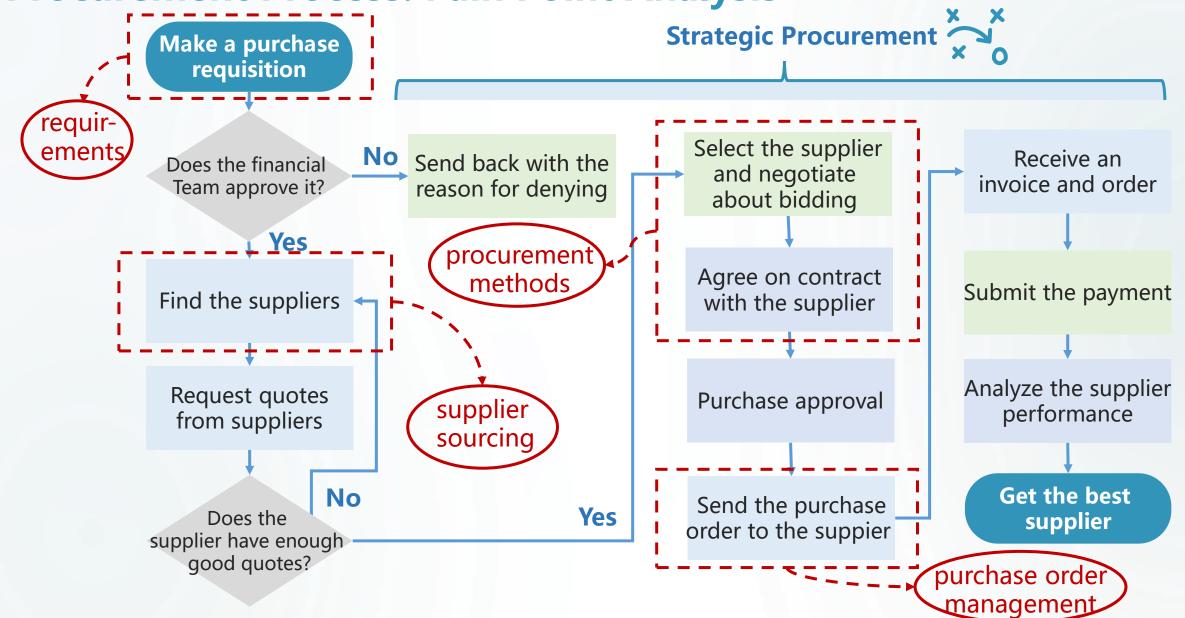
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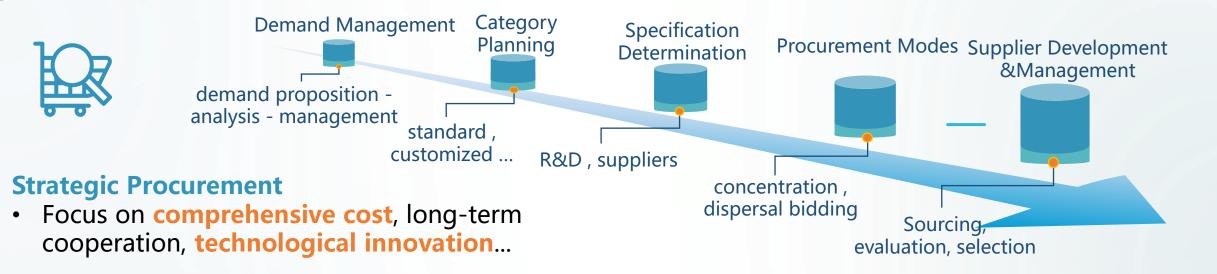


#### **Procurement Process: Pain Point Analysis**



Breakdown Of Existing Problems in Procurement							
	Issue	Problem Points	Solution				
Q1	Carton return event						
<b>Q2</b>	Standard parts are ordered in small quantities by multiple suppliers	Procurement quality	TCO Analysis				
<b>Q</b> 3	Outsourcing shell processing suppliers raise prices		Supplier Management				
<b>Q</b> 4	The requirements of the design department have changed	Purchase price					
<b>Q5</b>	Whether the product material has changed?	Procurement	Procurement Methods				
<b>Q</b> 6	The price of plastic pellets has risen	needs	Cross-				
Q7	Risk of diode out-of-stock		departmental Collaboration				

## **Strategic Procurement VS Operational Procurement**





#### **Operational Procurement**

Focus on low prices, stable supply, order & inventory management...

#### **Carton Case**

- only considering the lowest price, good payment terms,
- not considering quality, total cost and other factors
- typical operational procurement

**excessive attention** to operational procurement will lead to an **increase in total costs** 

Firm's Analysis Suggestion & Efforts Implementation

## **Strategic Procurement : Vision, Mission and Goals**

Company

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Carbon peaking & carbon neutrality goals

Vision

Strategy

**Overall cost leadership/ differentiation strategy** 







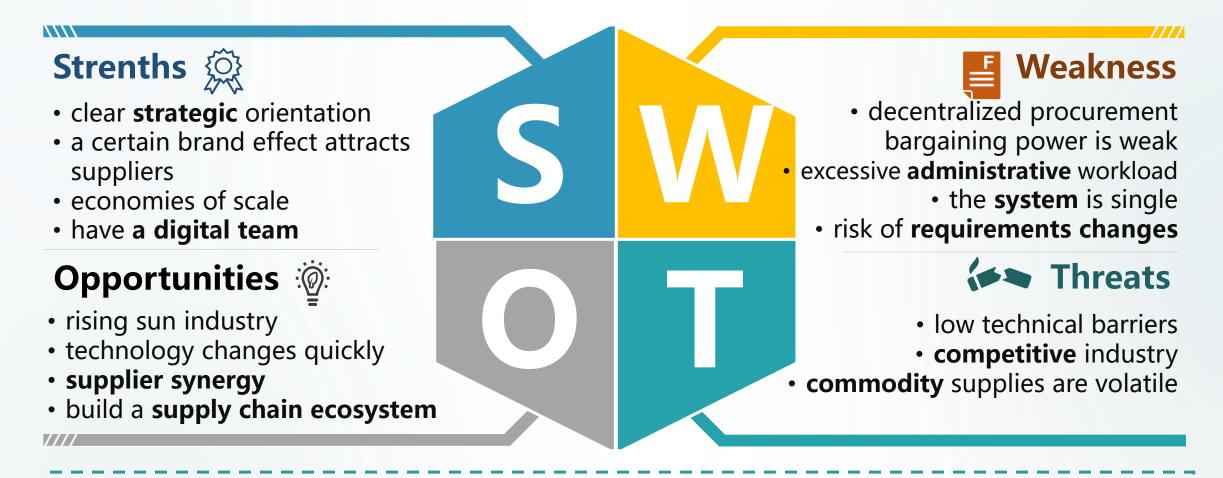
**Vision** Achieve excellence in sustainable procurement in a transformative environment

Mission Achieve optimized commercial solutions to achieve the goal of CleanTech

#### **Strategic Objectives**

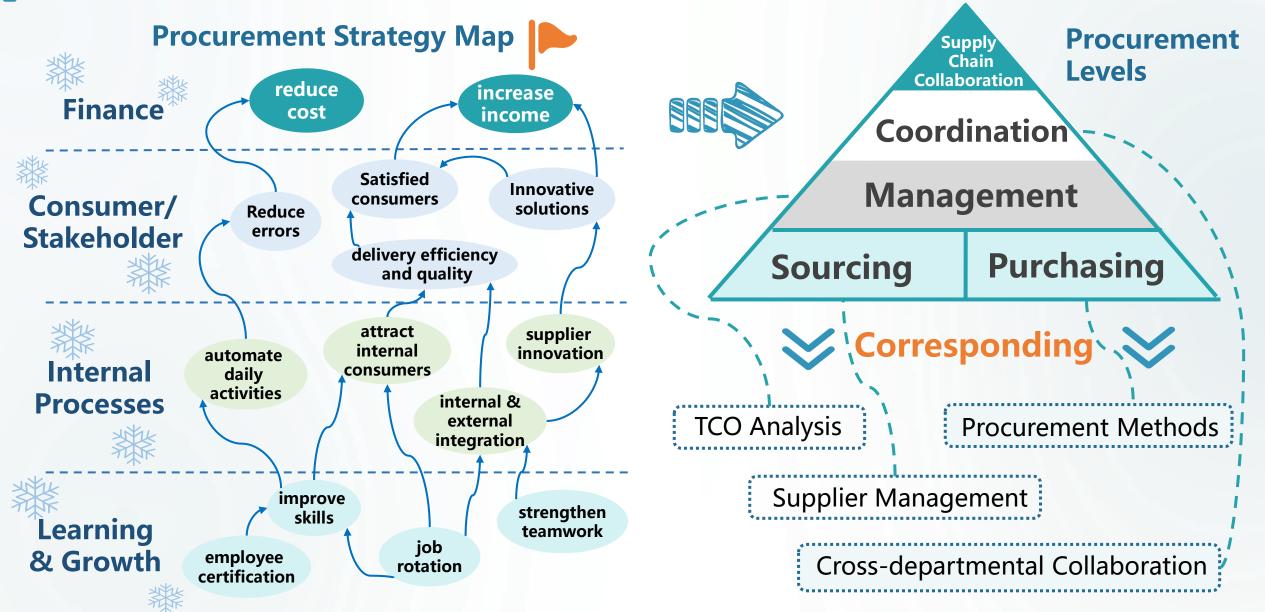
- Reduce procurement costs
- Optimization of procurement system and method
  - Consumer-oriented value transfer
  - Ensure effective technical support
  - Build internal and external strategic alliances

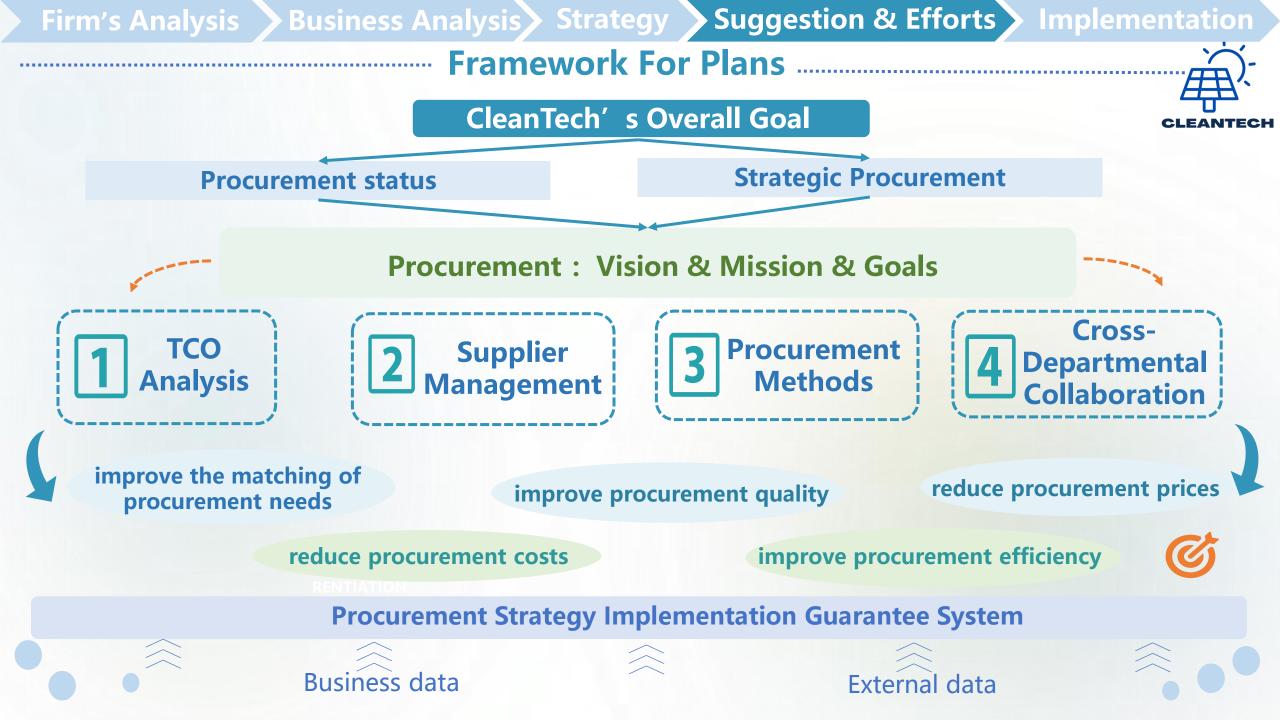
## **Strategic Procurement : Situation Analysis**



**CONCLUSION:** Analyze the total procurement **cost**, combine **intelligent technology**, and formulate strategies from the aspects of demand, **supplier sourcing**, **the mode**, **and purchase order tracking**, etc.

Strategic Procurement : Establish specific procurement strategies





## **TCO Analysis : Tip of The Iceberg**

purchase price storage fees duties & taxes

maintenance fees repair fees

user training order management costs

production interruption costs

customer complaint costs

purchase contract costs

environmental costs

information system costs

## **TCO Analysis : Total Cost Component of Procurement** What Goes Into a TCO Model?

Explicit Cost	Implicit Cost			
Supply Chain Cost	Cost of Quality			
purchase price	maintenance fees	internal disposal charges for		
	repair fees	non-conforming products		
storage fees	amortization of return packaging, etc			
neight	customer return costs			
Manage Costs	customer complaint costs			
travel expenses	production interruption costs			
staff salaries	<b>Environmental Costs</b>	Environmentally disposal costs		
	Purchase Contract Cost	contract negotiation, signing, performance and other costs		
Order Management Costs Information System Costs	costs such as order processing, notification to supplier shipping notifications, acceptance, payment, etc			

## **TCO Analysis : How to Calculate ?**

Cost Item	Cost Item Description			
Purchase price				
freight	shipping unit price * quantity * distance			
Duties & taxes	value of goods * tax rate	<b>:::</b> Ĭ		
Insurance costs	0.1% * cargo value (sea freight)	Calculate more accurately		
Storage fees	storage period * storage fee standard			
Travel expenses	transportation + accommodation + communication + others			
Procurement staff salaries	salary scale * Number of personnel			
repair fees	depends on repair time, material, complexity, etc			
Maintenance fees				
Amortization of return packaging, etc				
Internal disposal charges for non- conforming products	handling labor fee + equipment usage fee + material fee,etc	Estimates need		
Production interruption costs	cost of lost production + cost of repeated purchases	to be based on experience and specific		
Customer complaint costs	Fines and compensation costs, brand loss costs			
Customer return costs	costs cost of goods, shipping costs, storage costs, resale costs			
Loss of interest on payments	circumstances			
Environmentally friendly disposal costs	including but not limited to environmental protection fees, waste disposal fees, waste materials recycling fees, etc.			

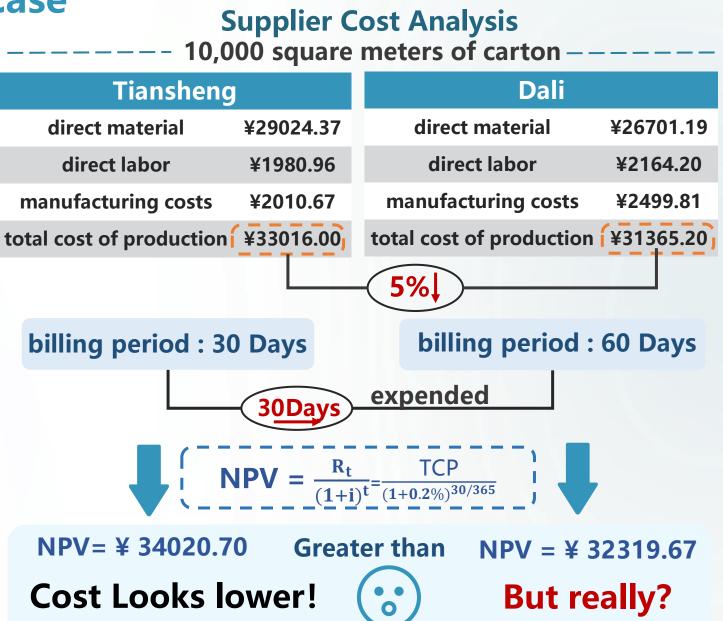
## **TCO Analysis : For Carton Case**

#### **Supplier market analysis**

The competitive state of China's paper packaging industry



• The **bargaining power** of buyers in the carton industry is weak, so we first analyze **the supplier cost**.



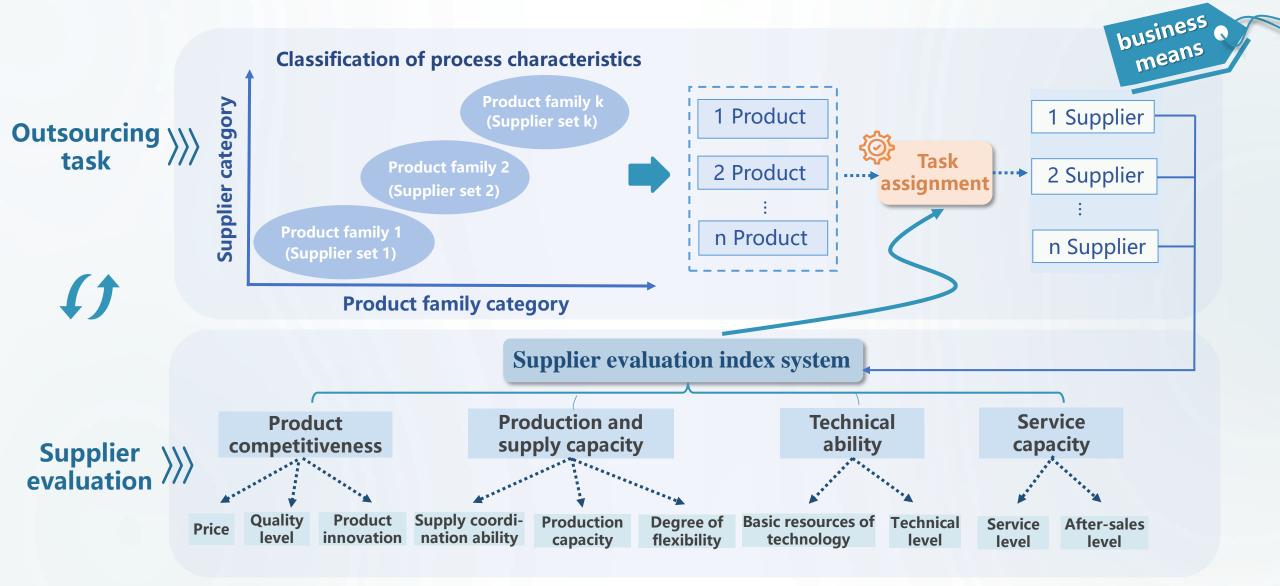
## **TCO Analysis : For Carton Case**

#### **TCO of Clean Tech's 10,000 m<sup>2</sup> Box**

Choose Tiansheng!

	Cost Item	Tiansheng	Ritio	Dali	Ratio	nansneng:
	purchase price(PV)	¥34020.70	77.34%	¥32319.67	70.81%	
	freight(PV)	¥4788.21	10.89%	¥3199.47	7.01%	explicit cost
	insurance costs & taxes(PV)	¥68.03	0.15%	¥64.63	0.14%	
	storage fees	¥880.00	2.00%	¥990.00	2.17%	Dali is ¥ 3183.18 lower
	subtotal	¥39756.95	90.38%	¥36573.77	80.13%	
	inspection costs	¥1100.00	2.50%	¥1220.00	2.67%	
	maintenance costs	¥980.00	2.23%	¥1200.00	2.63%	- implicit cost
	production interruption costs	¥530.00	1.20%	¥1430.00	3.13%	implicit cost
	internal disposal charges for non- conforming products	¥540.00	1.23%	¥1080.00	2.37%	Tiansheng is ¥ 4840.00 lower
	customer complaint costs	¥520.00	1.18%	¥2260.00	4.95%	
	customer return costs	¥220.00	0.50%	¥1060.00	2.32%	
	environmental costs	¥340.00	0.77%	¥820.00	1.80%	
	subtotal	¥4230.00	9.62%	¥9070.00	19.87%	Tiansheng's TCO is ¥1656.82 lower
total cost of ownership		¥43986.95	100%	¥45643.77	100%	+1050.02 100001

## Supplier Management: Task assignment-evaluation closed-loop



## Supplier Management : Task assignment-evaluation closed-loop

business

#### **Evaluation value of outsourcing suppliers**

							mean		
First-level index	Secondary index	Weight	Supplier Sunny	Score (Sunny)	Supplier A	Score (A)	The quotation of Sunny		
Product competitiveness	Price	0.124	1	0.124	5	0.62	higher than that of		
	Quality level	0.113	5	0.565	3	0.339	) other suppliers.		
	Product innovation	0.102	3	0.306	1	0.102			
Production and supply capacity	Supply coordination ability	0.127	3	0.381	3	0.381	,、		
	Production capacity	0.062	2	0.124	2	0.124	The quality of processing i and technology is in the		
	Degree of flexibility	0.078	3	0.234	1	0.078	forefront of outsourcing suppliers		
Technical ability	Basic resources of technology	0.152	3	0.456	2	0.304			
	<b>Technical level</b>	0.185	2	0.37	2	0.37			
Sonvice especity	Service level	0.041	3	0.123	3	0.123			
Service capacity	After-sales level	0.016	2	0.032	3	0.048			
total	-	1	27	2.715	25	2.489	Choose Sunny!		

#### Management means Supplier Management : **Supplier lifecycle** Index **Release purchasing** requirements Start to establish relati-**Potential** Latent period supplier onships with suppliers, **Product design** Admission find potential suppliers, application **Position** and determine supplier access list. Responding **Research period** supplier Qualification examination **Implement targeted** Choice Candidate Access management strategies **Formative period** evaluation supplier according to suppliers' **Flexible ability** category evaluation Supply of **Preferred supplier Technical support** rcharacteristics and goods performance esults. Service capacity

Business Performance Qualified **Supplier Stable period** ..... adjustment evaluation management supplier Degraded Preferred **Elimination** recycling **Degradation / Strategic** Eliminate blacklisted **Resource consumption** optimization period supplier suppliers

Selection and elimination according to the situation of suppliers

Suggestion & Efforts Implementation Business Analysis Firm's Analysis Strategy

## Supplier Management : Supplier collaborative management





#### **Increase supplier participation**

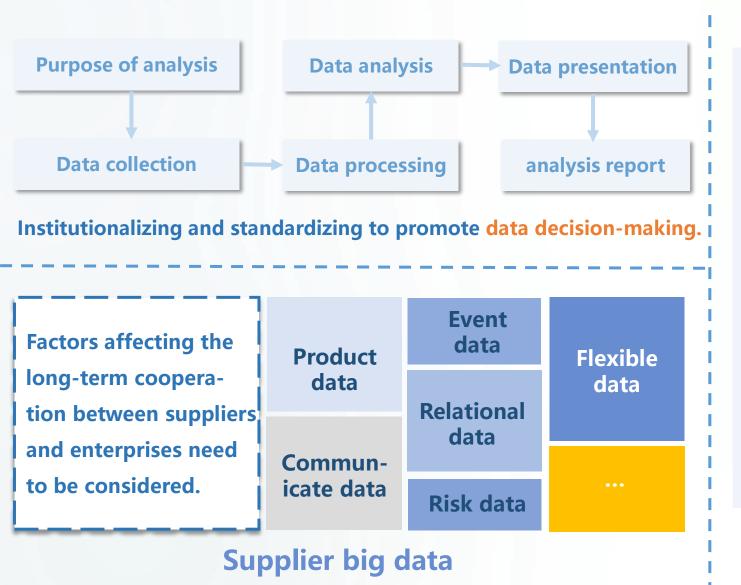
- ✓ Jointly develop new products, share technical information, etc.
- Share risks and opportunities together
- Establish a good communication and coordination mechanism

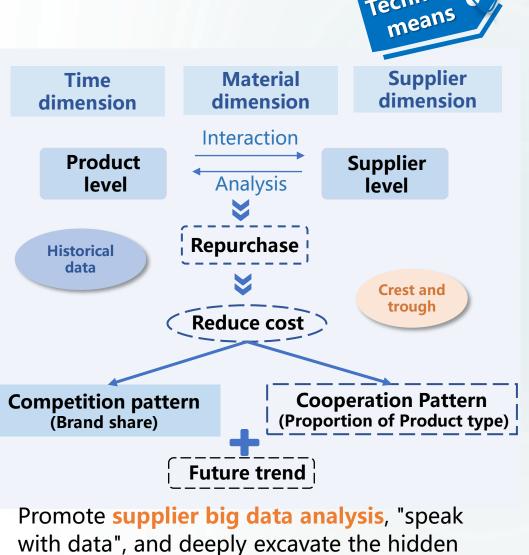


- ✓ Provide long-term orders and cooperation plans
- In-depth cooperation and technical support
- Regularly evaluate the performance of outsourced suppliers

Enterprises and suppliers build a strategic partnership to achieve a win-win situation.

# Supplier Management : Supplier data decision-making "





value of procurement data analysis.

## **Procurement Methods : Centralized Procurement**



Establish a procurement agency to *centrally* manage the procurement of goods required by the entire company

#### Integrate procurement organizational

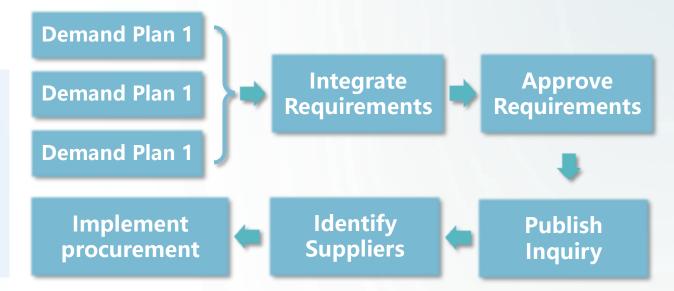


#### **Optimize procurement process**

For products
Centralized demand management
For supplier selection
Procurement organization determination
For suppliers
Centralized procurement implementation

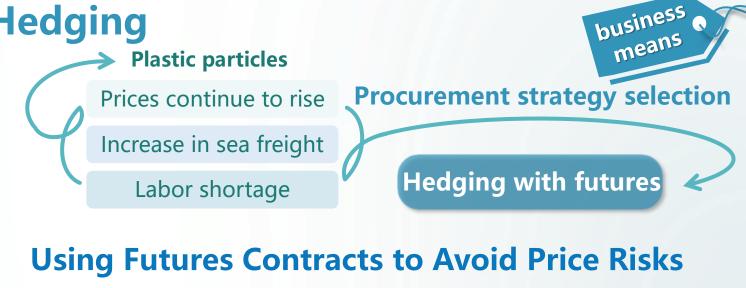
Centralized procurement authority management From scattered orders to unified procurement by the group Resource optimization and allocation Management Improve the supply situation of the same material Refined management of procurement work

**Refined management of procurement work** Responsible for procurement of different product stages



## **Procurement Methods : Hedging**





- High correlation between main contract period and current price
- Active market transactions and good liquidity
- High participation of physical enterprises

#### Feasible

Utilizing the mature plastic futures market managing enterprise risks *exploring* spot channels



Determination of hedging quantity

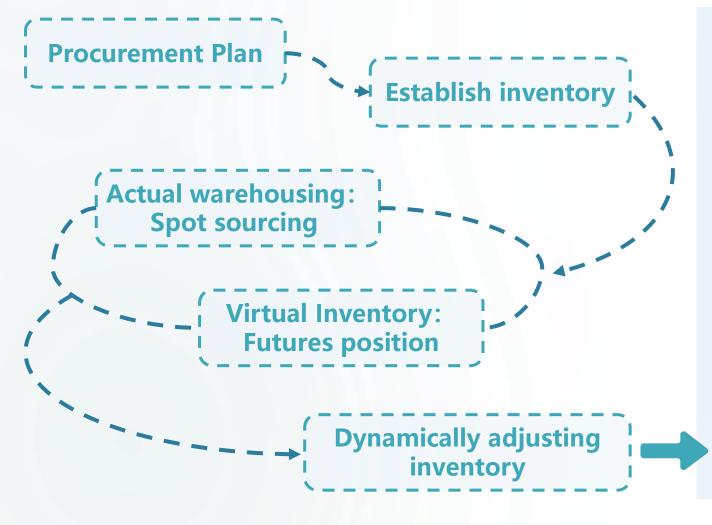


Partial hedging

Continuously adjust futures positions based on the progress of raw material usage during the holding process, until all futures positions are closed.

## **Procurement Methods : Hedging**

Using futures contracts to dynamically manage inventory



#### When raw material *prices rise*

• Establish virtual inventory

When the spot price of *raw* materials is *low* 

business means

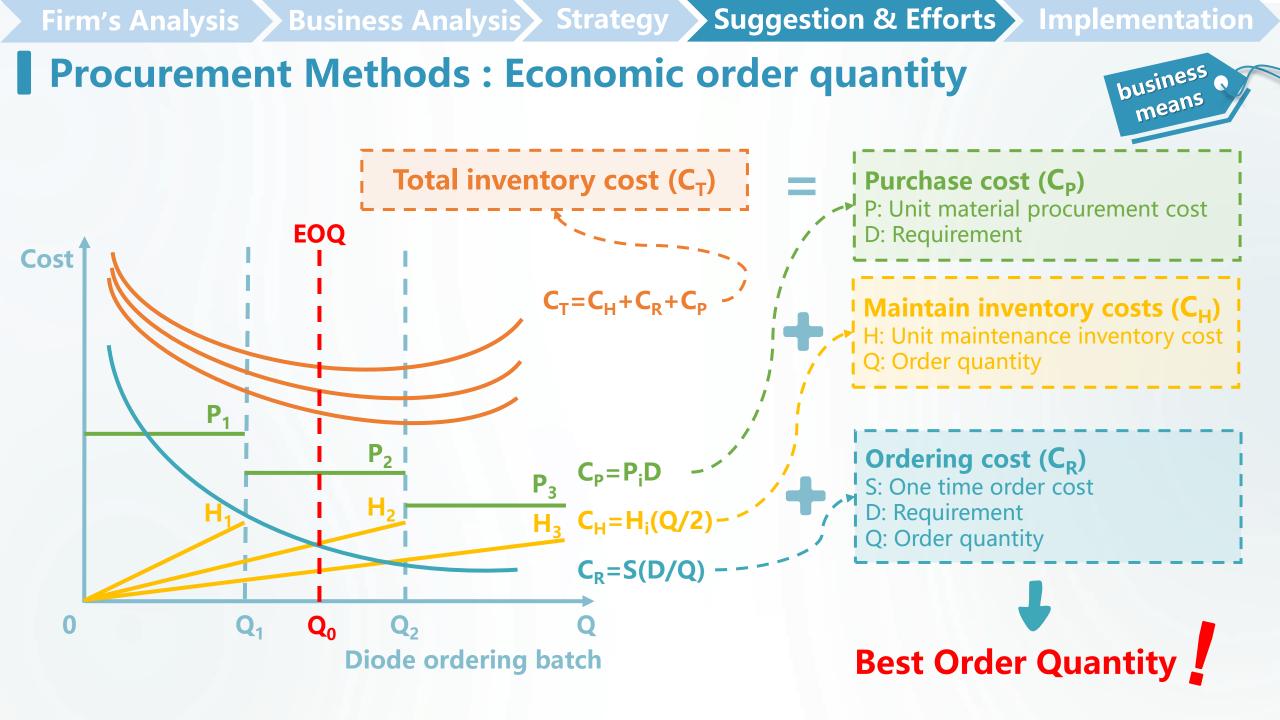
• Futures contract management inventory

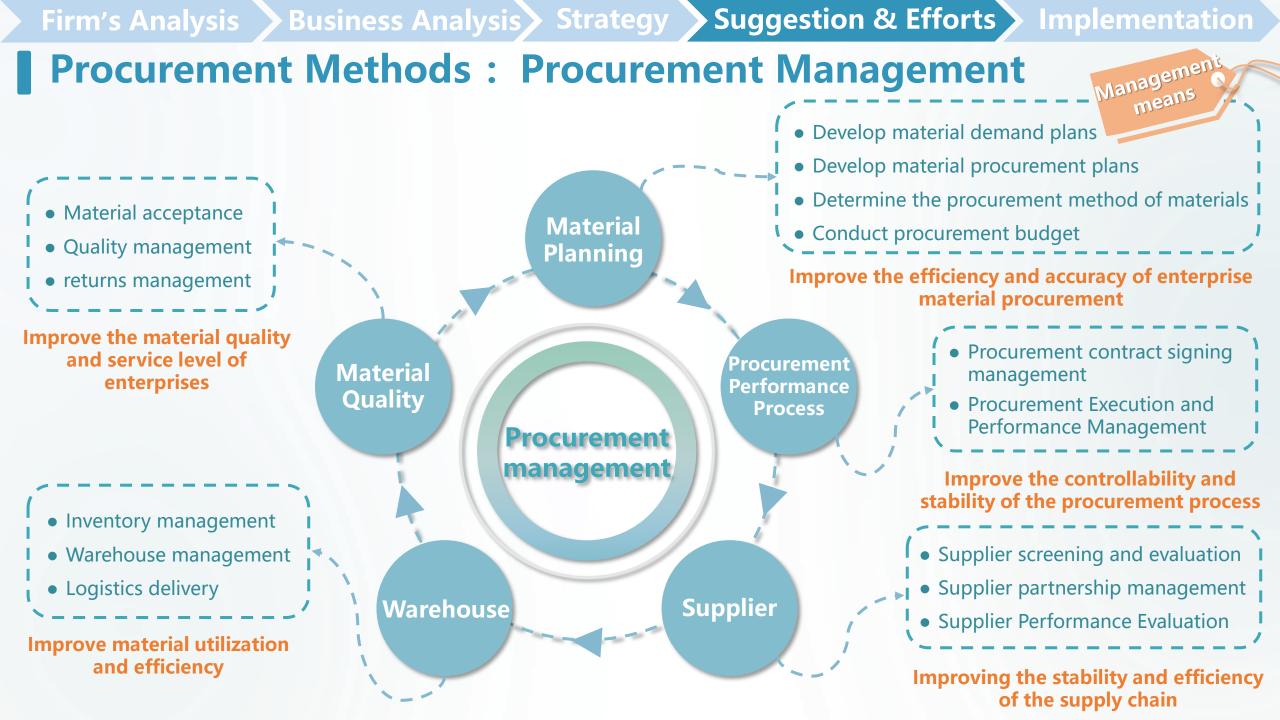
#### When under *financial pressure*

- Sales of inventory raw materials
- Convert actual inventory to virtual inventory

#### After the financial pressure is *relieved*

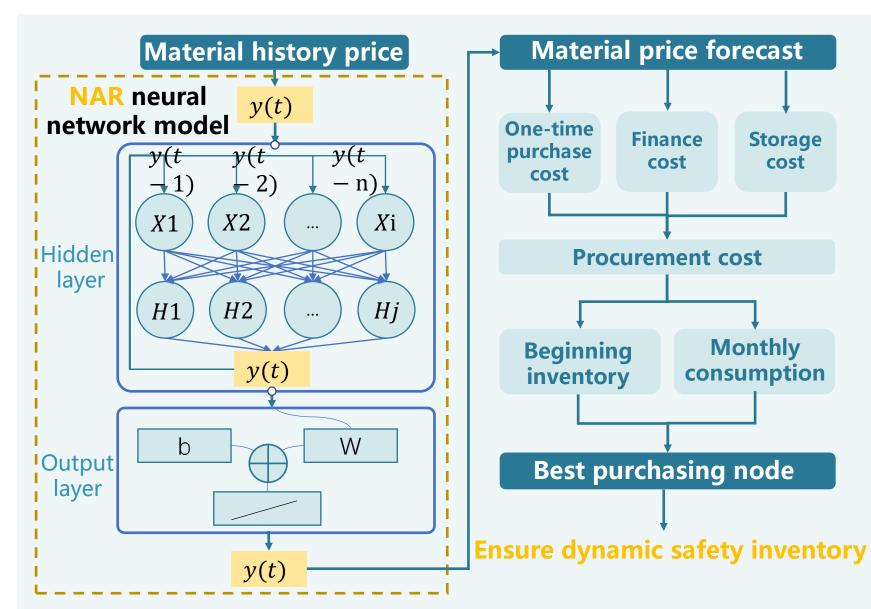
• Convert virtual inventory to actual inventory





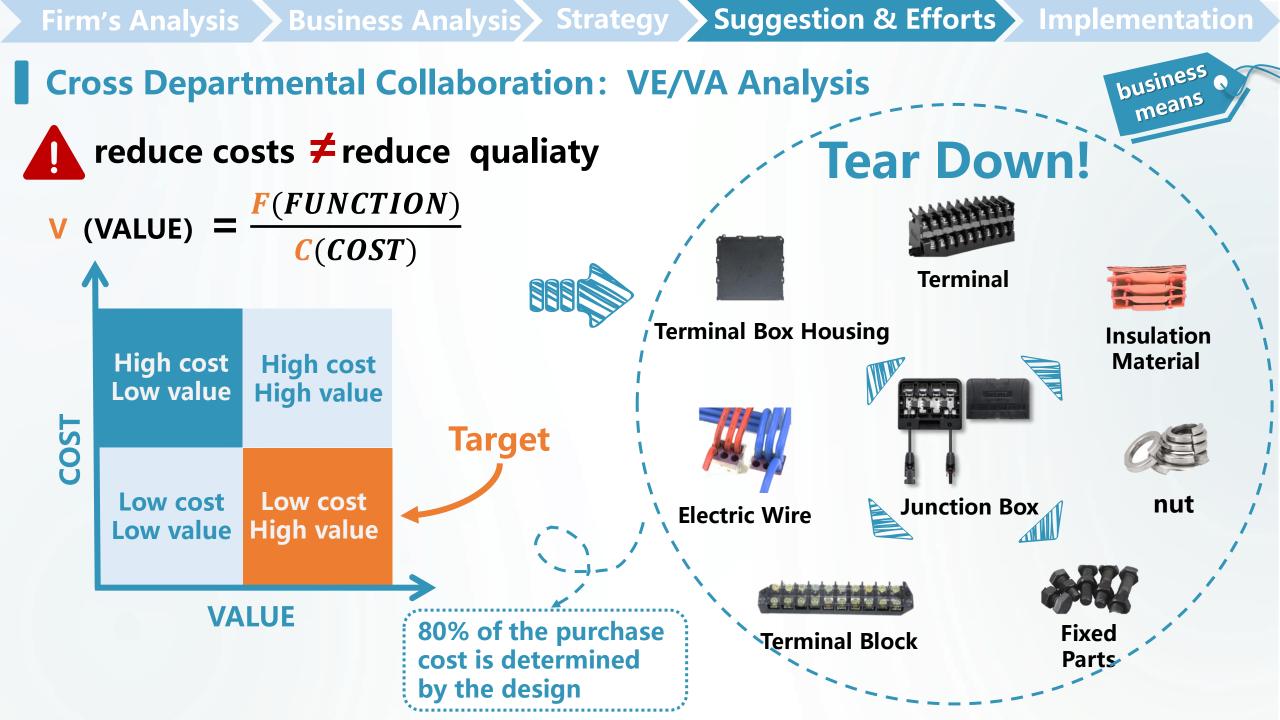
#### **Procurement Methods : Procurement price & node forecast**





Use the material price forecast to calculate the procurement cost and determine the best purchasing node.

- Replenish dynamic inventory according to minimum purchase quantity
- Purchase according to the best purchasing node

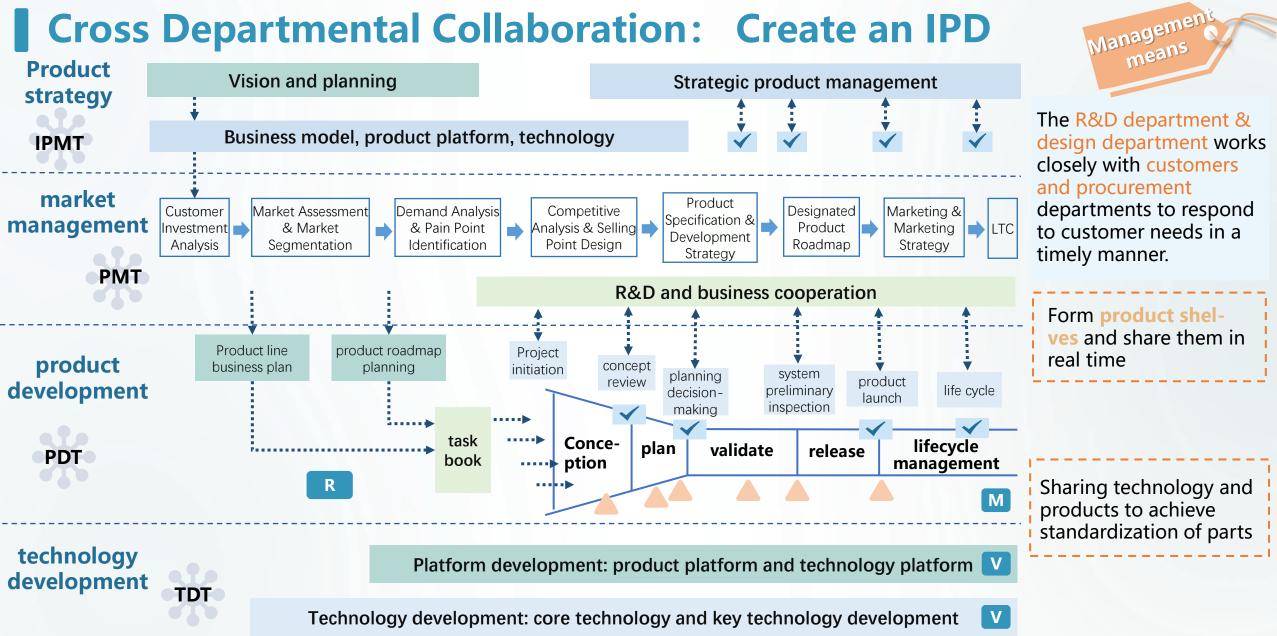


## **Cross Departmental Collaboration: VE/VA Analysis**

Cross	business o				
Cost Elements	Importance	Cost	Decision	Tactics	busines
Terminal box housing	Medium	High	Reduce	<ul> <li>1.Use cheaper materials: polypropylene or polyethylene</li> <li>2.Reduce processing steps: use injection molding technology</li> </ul>	
<b>Terminal Block</b>	Medium	Low	Maintain	on par with the industry	
diode	High	Medium	Maintain	on par with the industry	Change the unrea- sonable design of
Electric Wire Fixed Parts	High Medium	High Low	Maintain Maintain	on par with the industry on par with the industry	the product and the
Insulation Material	Low	Low	Reduce	<ol> <li>Use cheaper material: plastic film</li> <li>Optimize design: reduce the demand for insulation materials</li> </ol>	excessive quality requirements.
Fuse	High	Medium	Maintain	on par with the industry	
LED	Low	Low	Reduce	<ul> <li>1.Use cheaper material: Epoxy resin, aluminum plate</li> <li>2.Optimize design:Increase the area of the heatsink</li> </ul>	

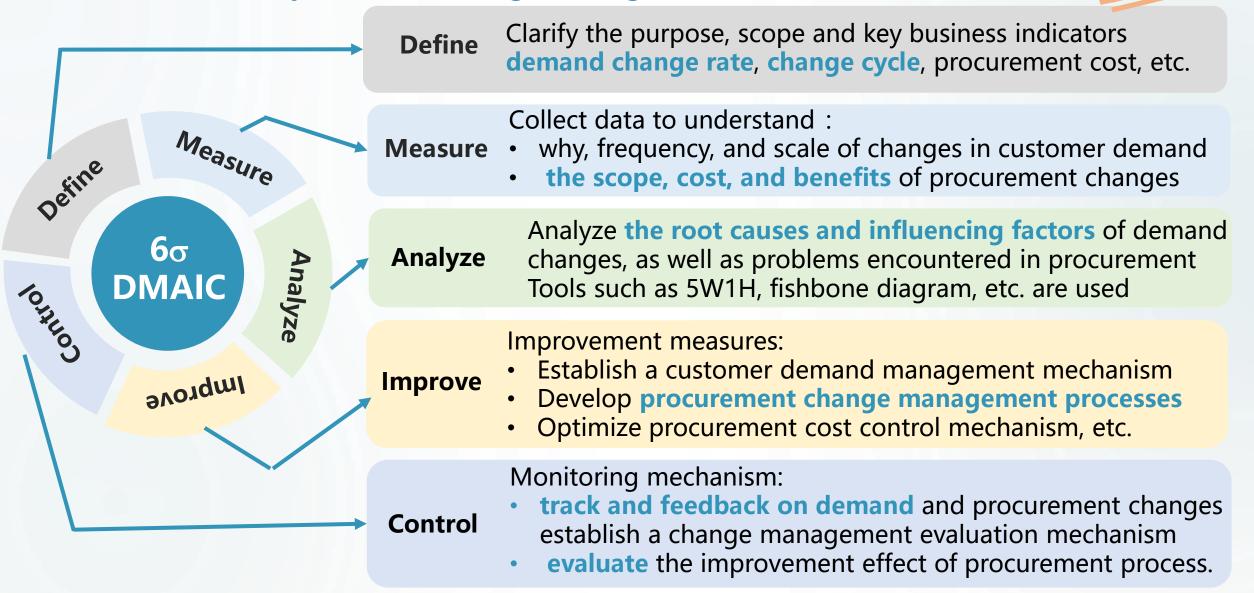
Suggestion & Efforts Firm's Analysis 🜔 Business Analysis **Strategy** Implementation

# **Cross Departmental Collaboration:** Create an IPD

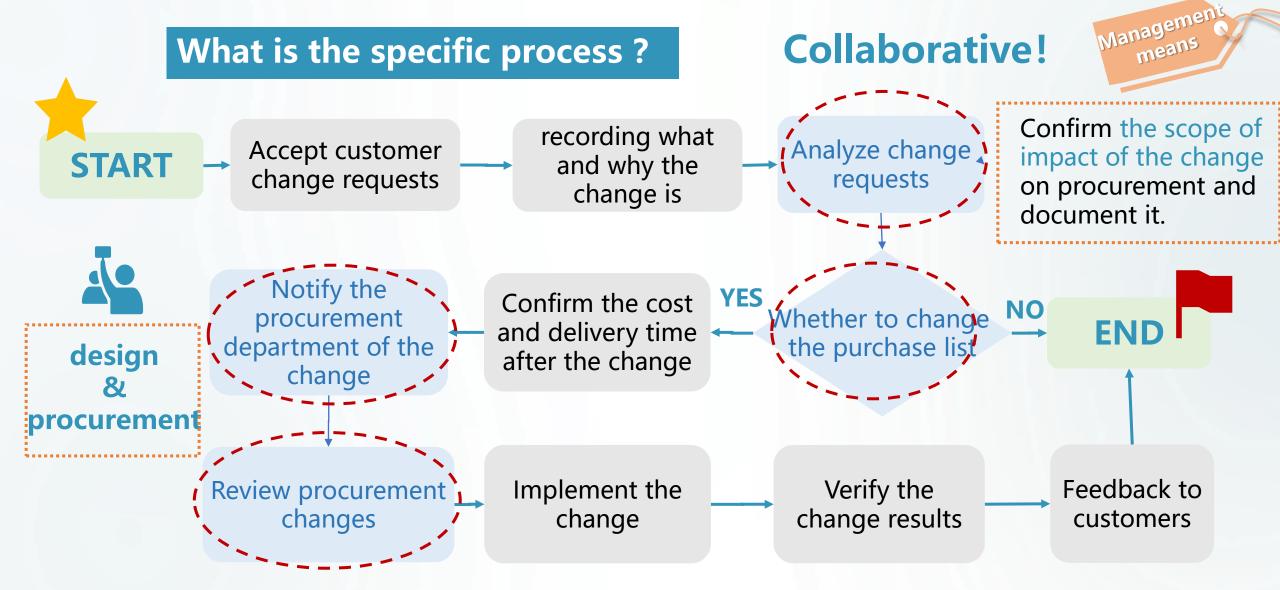


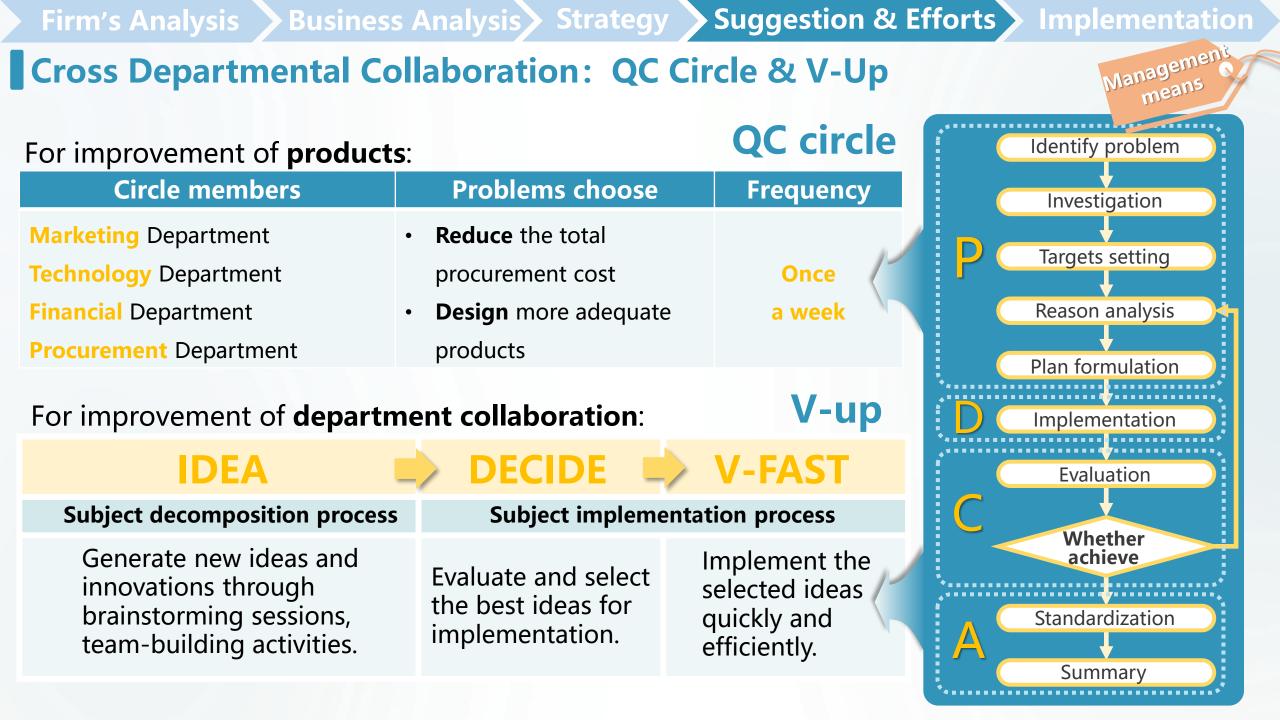
Managemen

#### **Cross Departmental Collaboration: DMAIC** Requirements Change Management Processes



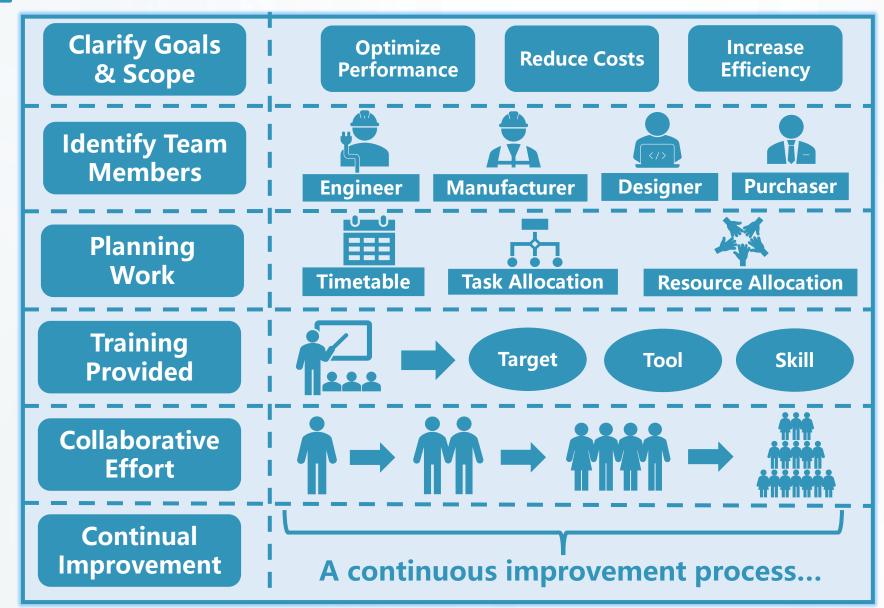
#### **Cross Departmental Collaboration:** Requirements Change Management Processes





Suggestion & Efforts Implementation Business Analysis Strategy Firm's Analysis

#### **Cross Departmental Collaboration: Design Optimization Team**

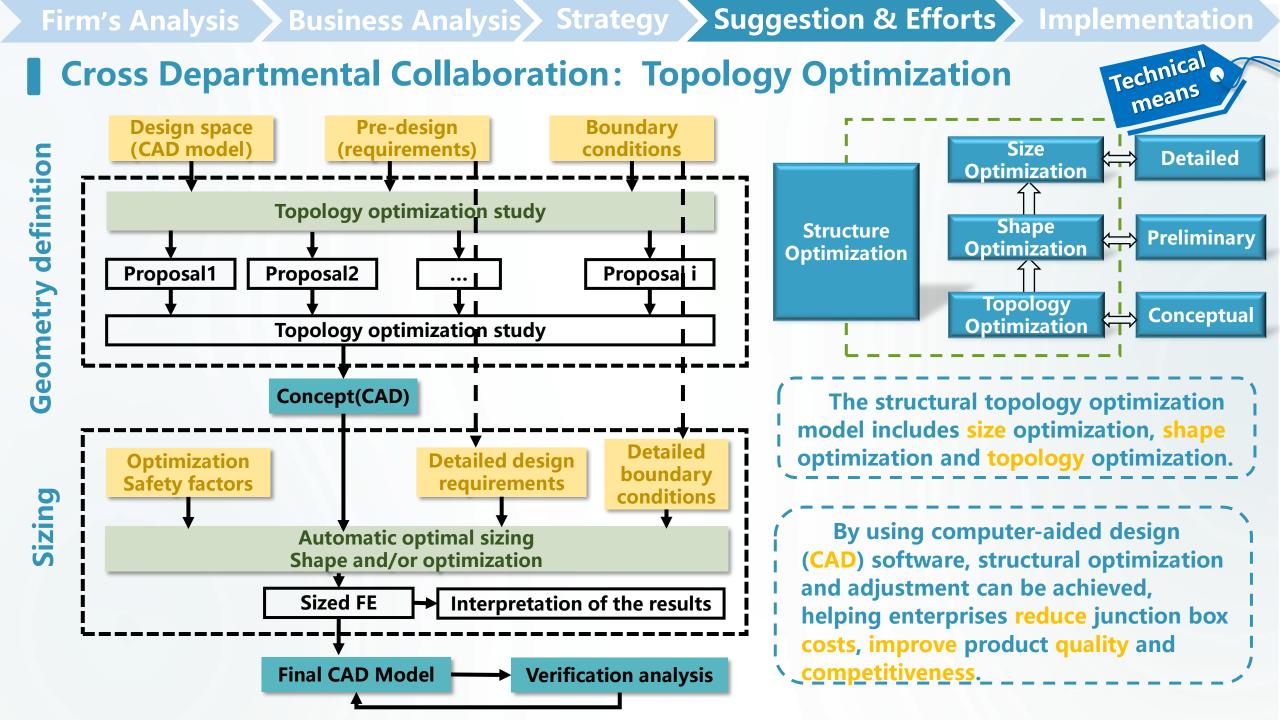


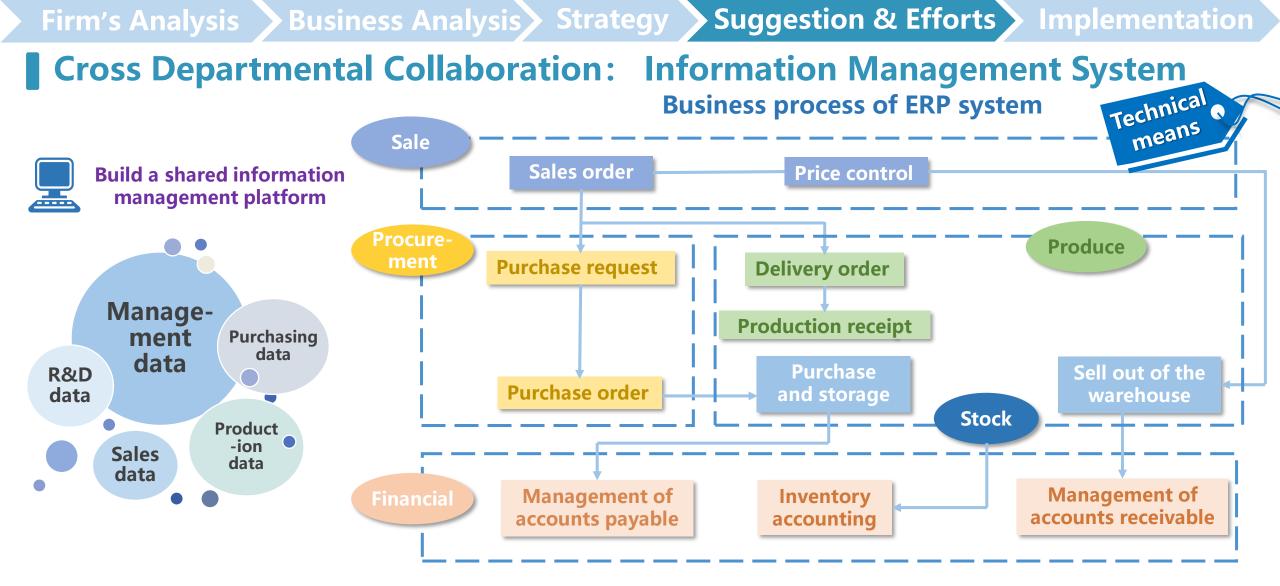
**Establishing** a **design** optimization team is an important step in achieving product design optimization. This step includes: (1) Clarifying goals and scope **(2)** Identify team members **③** Planning work **④** Training provided **(5) Collaborative effort (6) Continual improvement.** 

Management

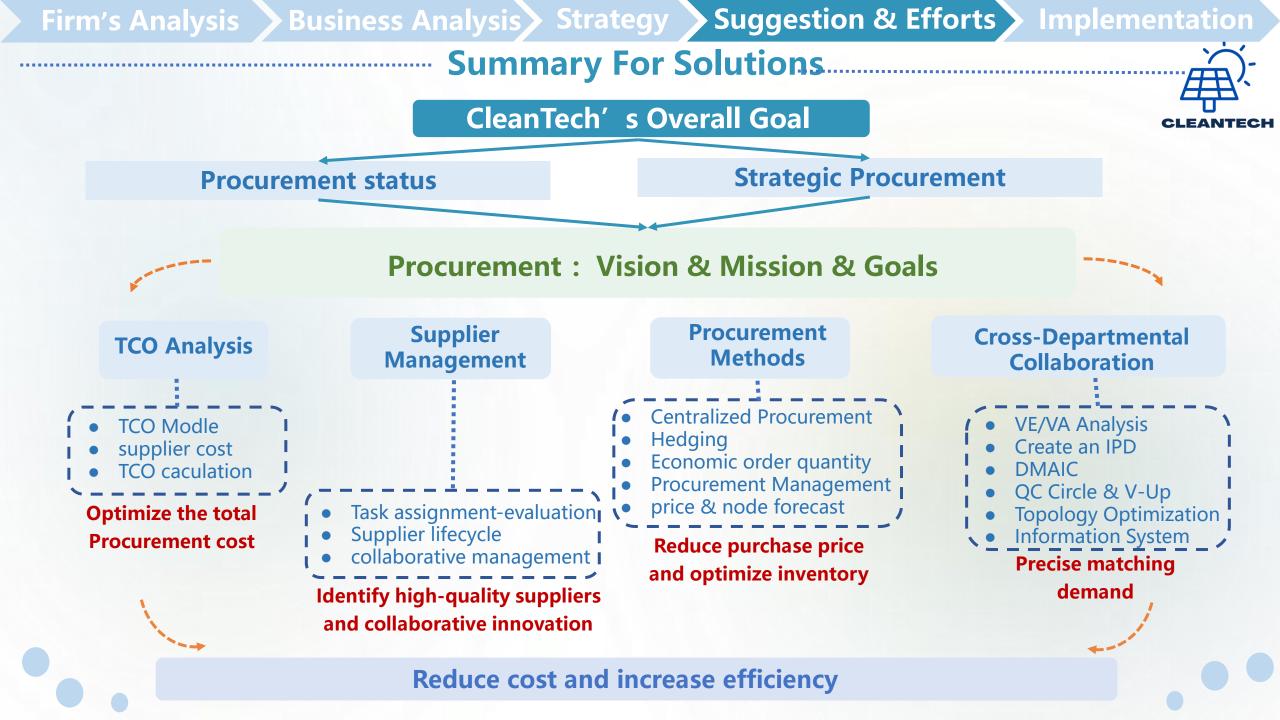
means

This can help enterprises optimize and improve product design!!!





Avoid the phenomenon of information asymmetry within the company Improve the operating efficiency of enterprises



#### **PISS – Procurement Implementation Supporting System**



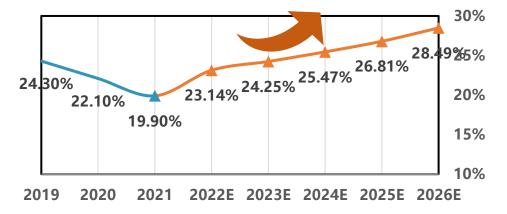
### **An Implementation Timeline**

			20	122					20	23		
Implementation Plan	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Procurement Strategy												
TCO Analysis												
Supplier Management												
Task assignment-evaluation												
Supplier lifecycle												
🗹 Collaborative Management												
<b>Procurement Methods</b>												
Centralized Procurement												
Hedging												
Economic Order Quantity												
🗹 Price & Node Forecast												
<b>Cross-DepartmentalCollaboration</b>												
🗹 VE/VA Analvsis & DMAIC												
🗹 QC Circle & VUp												
Information System												

# **Implementation Effects**

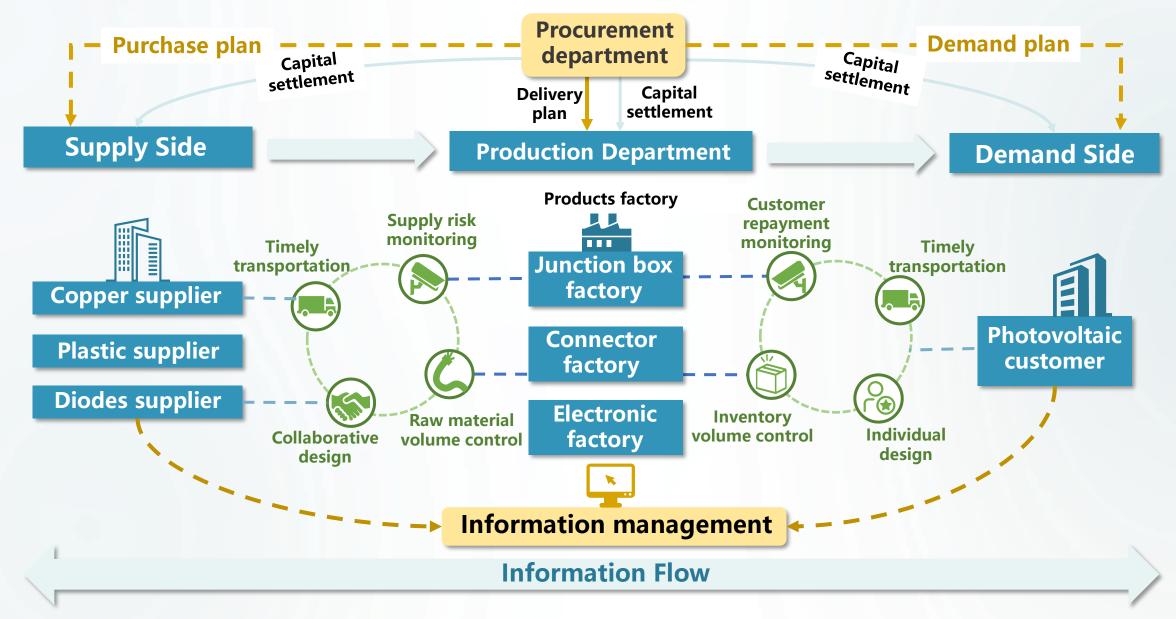
The individual effect of gross margin		The individual effect of implementation on gross margin									
2070	٠	Element of implementation	2022E	2023E	2024E	2025E	2026E	effects			
22% -	••••••••••••••••••••••••••••••••••••••	total cost model	21.34%	21.46%	21.69%	21.82%	21.94%				
21% -		=- EOQ	20.08%	20.39%	20.57%	20.70%	20.71%	Sustainable			
20% -	8	hedging	19.44%	19.61%	19.78%	19.83%	19.89%	effects			
<b>19%</b> -		concentrated procurement	18.64%	18.86%	18.97%	19.00%	19.05%				
1970	8======	-	18.58%	19.21%	19.83%	20.62%	21.18%	Growing			
18% -	2022E 2023E 2024E 2025E 2026E		18.69%	18.98%	19.56%	20.52%	22.36%	effects			

Estimated Gross Profit									
Estima	ated (million)	2022E	2023E	2024E	2025E	2026E			
Revenue		730.00	916.28	1150.10	1443.58	1811.95			
	Direct material	471.63	581.79	716.32	879.73	1073.67			
	Direct labor	53.66	67.35	84.53	106.11	133.18			
Cost of sales	Manufacturing cost	35.77	44.90	56.36	70.74	88.79			
	Total cost of sales	561.06	694.04	857.21	1056.58	1295.64			
G	ross profit	168.94	222.24	292.89	387.00	516.31			



All measures have a positive impact on increasing profits and reducing costs

#### Supply Chain Ecological Outlook



#### Supply Chain Ecological Outlook Outsourcing industry leading products

Strategy Level

**Tactics** Level

Cultural value integration Unity of development goals Income apportionment Risk sharing

Bidding mode cost control Supplier management Process management Management Assessment Risk transfer of interest game between buyers and sellers

Annual competitive bidding Supply chain cost control Expand supplier pool Strict after-sales contract Strict KPI assessment

Cooperative research and development &OEM production

Interests integration and risks shared

Comprehensive collection Collaborative cost control Cross-functional capital team Improve project management Multidimensional evaluation

Technology LevelInformation collection & storageSystem construction-Confidentiality agreement

Standardized process Traditional KPI assessment index Confidentiality of contract

**Present goal** 

Create supplier portrait Optimize system functions Technical information confidentiality

**Future goal** 

N E W E N E R G Y Way. ToogRa Image Stock, is ince commence with 'producing digital image stock-intergramery business in 1982 have been building outstanding succe distributing wilcows and of collections from owness countries tokens and it sugeplying our own collections through accurd 4 channel pu

# THANKS

Solar Quintet XN20222409