

# CleanTech Co.



## Break the Obstacles, To be the Finest

— Budgeting & Business Planning of CleanTech Co.

XN20222409

# Solar Quintet Members



Li WanLin

**Lindsay**

**R&D  
Director**



Liu Hong

**Jessie**

**Marketing  
Director**



Deng TianYu

**Frank**

**Procurement  
Director**



Deng XiangYu

**Shirley**

**Production  
Director**



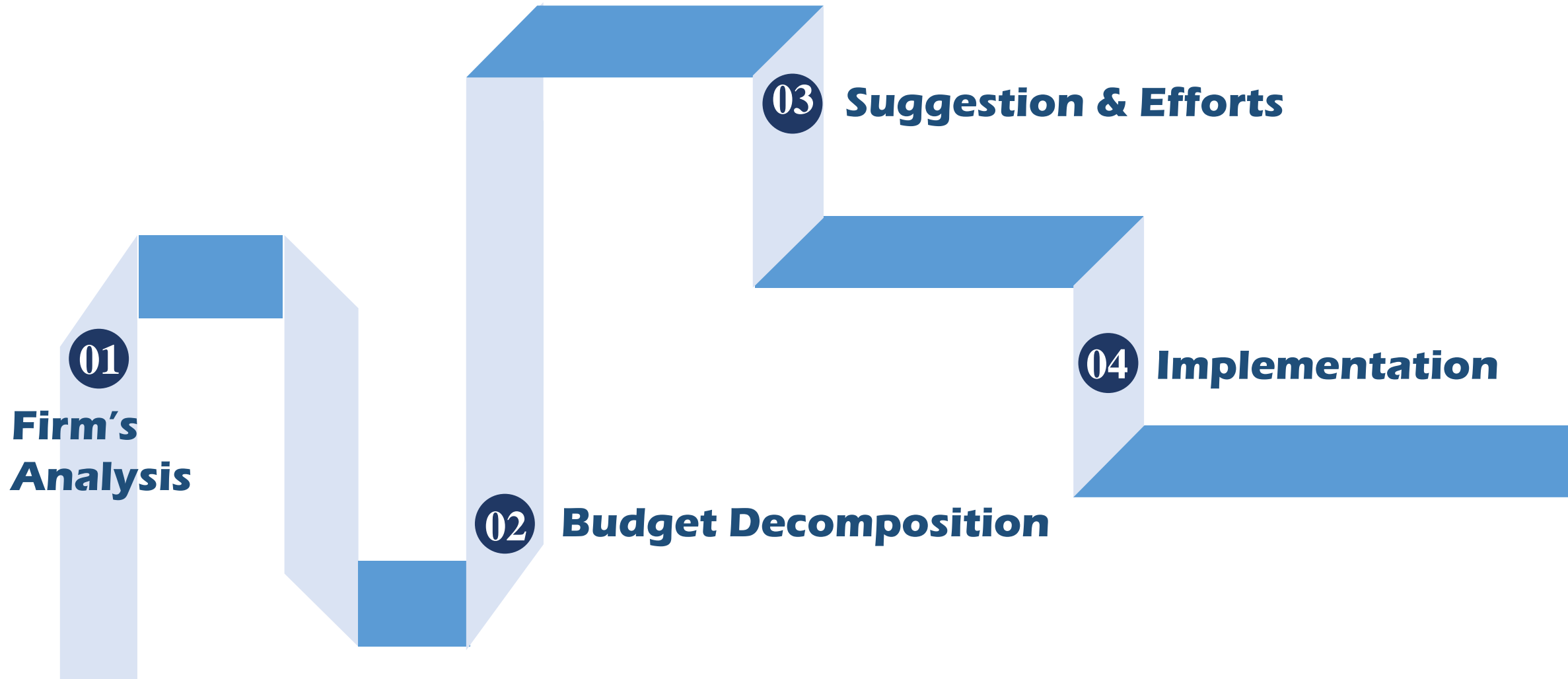
Wang JunSu

**Sue**

**CFO**

# CONTENT

Our team will analyze the current and future situation of CleanTech , propose and decompose our budget targets, then give suggestions **according to the following process.**



## Mini-Theatre — Budget Kick-off Meeting ...

The budget for the R&D department **is far from enough**, I need to gather the executives and directors of each department to hold a **budget management meeting**...

**The overall budget target of 2022**, sales revenue of 730 million yuan, net profit of 70 million yuan, and total asset turnover of 1.15...

**Rising costs**

**The speed of asset turnover decreased**

Shanghai Futures Copper Price Trend

70000  
50000  
30000

2019.06

2020.06

2021.06



**CRO Lindsay**



**Daniel.Zhu**

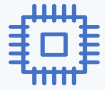
A modern conference room with a long, dark wood conference table in the center. The table is surrounded by several white, high-back office chairs with black armrests. The room has a high ceiling with recessed lighting and a large window in the background showing a landscape. The walls are dark wood, and there is a large framed picture on the wall to the right. The floor is light-colored and reflective.

# In The Meeting

# Company & Industry Basic Information



Clean Photovoltaic Technology Co. Ltd.

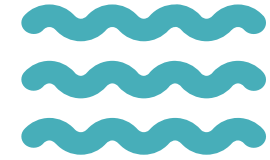


High-tech electronics manufacturing enterprise

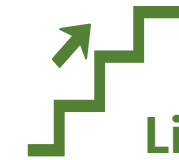


PV junction box and connector

Blue Ocean Market



Fierce competition



Mingxi Co.

Lingxian Co.

Revenue has grown steadily in the past 3 years ✓



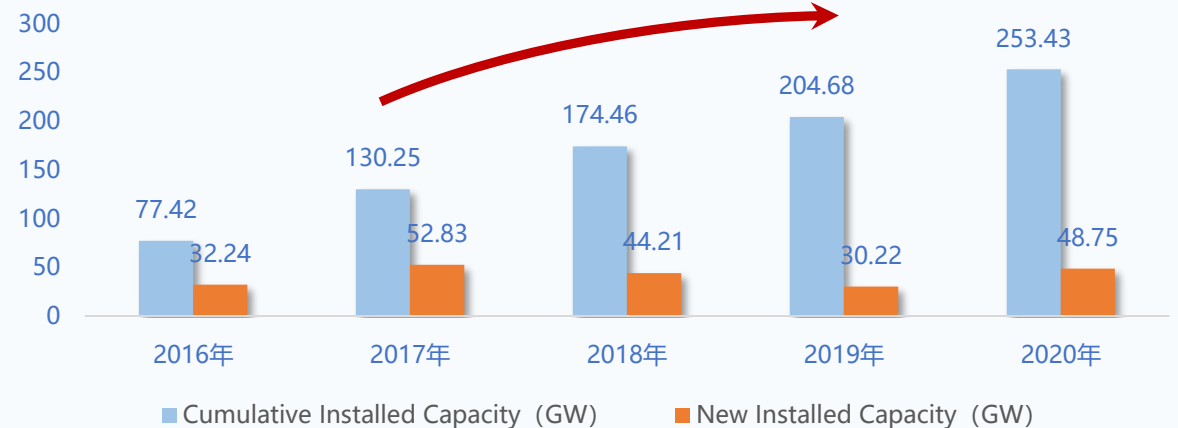
Enter The First Echelon !



CleanTech Co. Revenue Trend

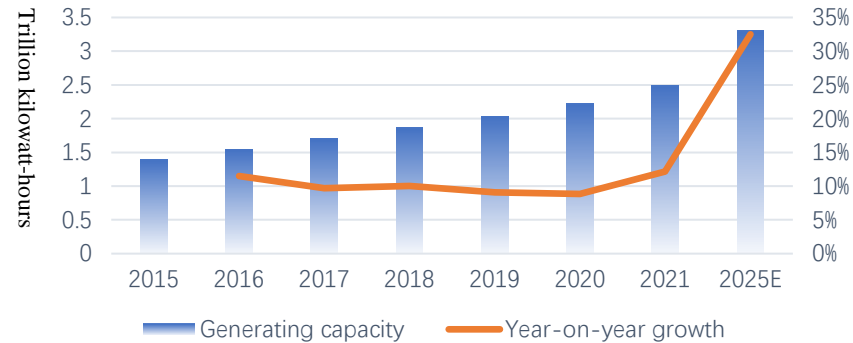


China's cumulative PV and new installed capacity



# Macro Analysis : PEST

Statistics and Forecast of Renewable Energy Generation in China



## P

### Political

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

## E

### Economic

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

## S

### Social

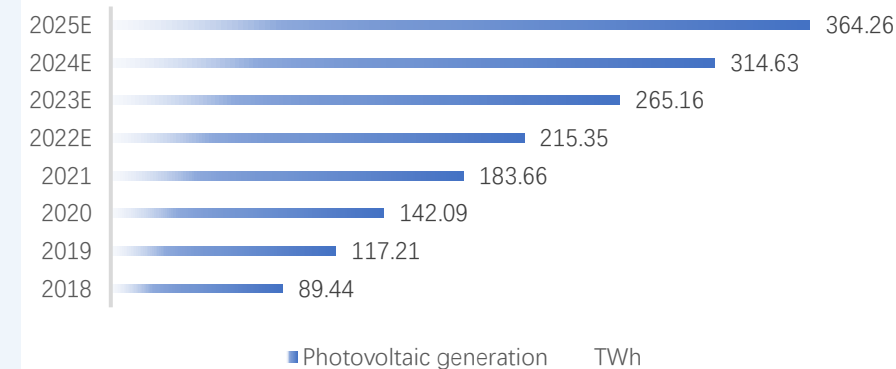
- Attach importance to the development of **renewable energy**.
- People gradually form a **healthy concept of consumption**.
- **Multi-level society needs** to provide space for development.

## T

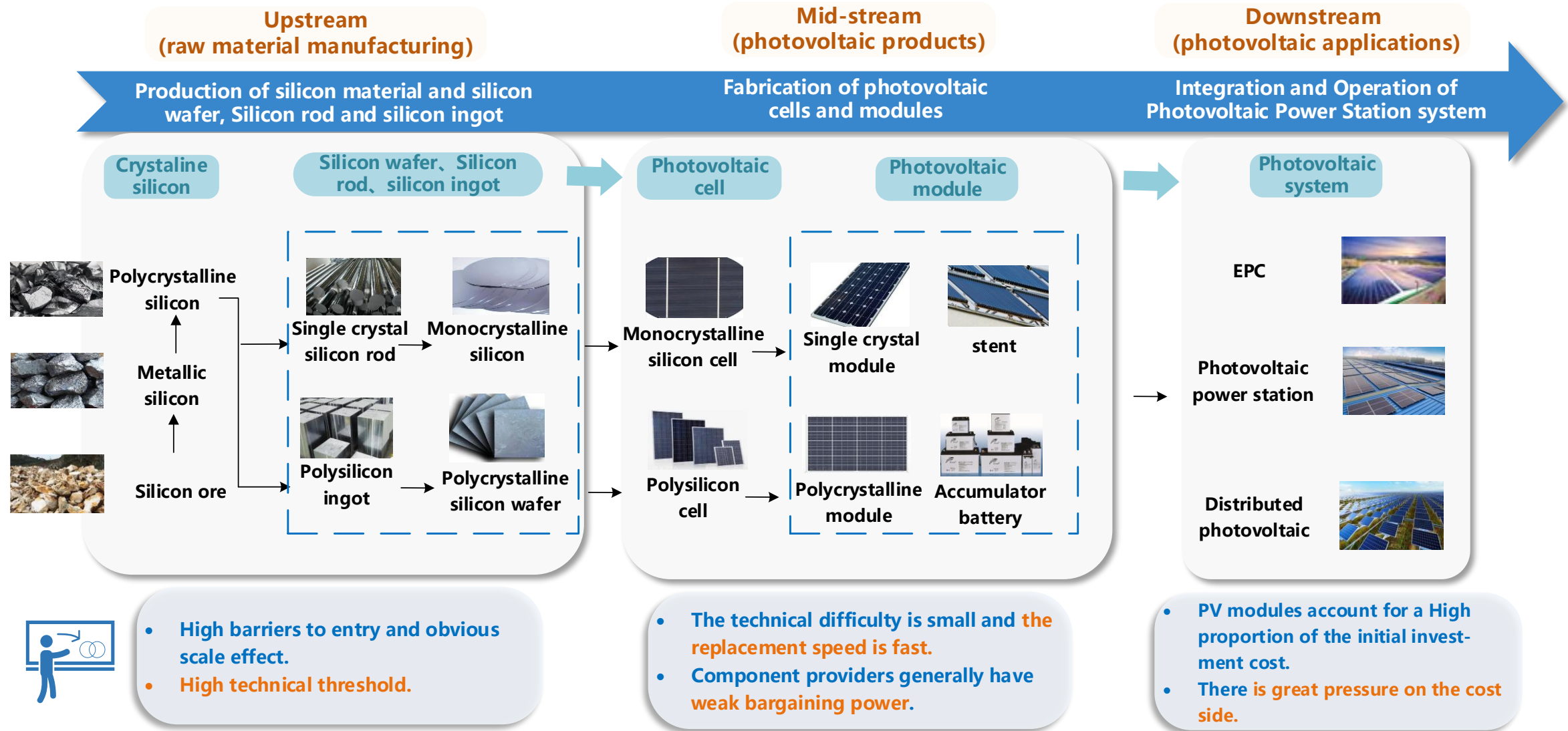
### Technological

- 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

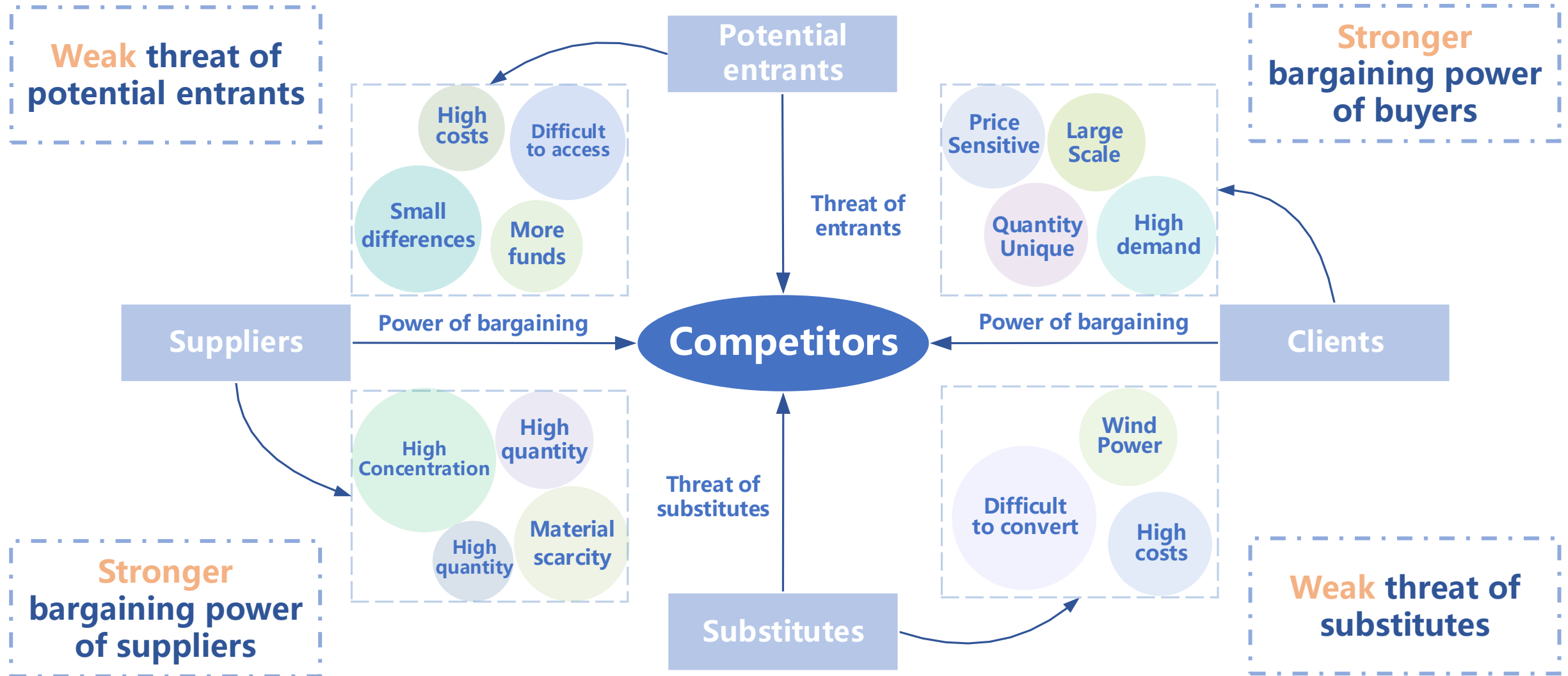


# Meso analysis: Industry Chain Analysis





# Micro Analysis: Analysis of Competitive Environment



## Corporate Strategy



CleanTech Co.

Vision

Entered **the first tier** of the supporting production industry of domestic PV module enterprises

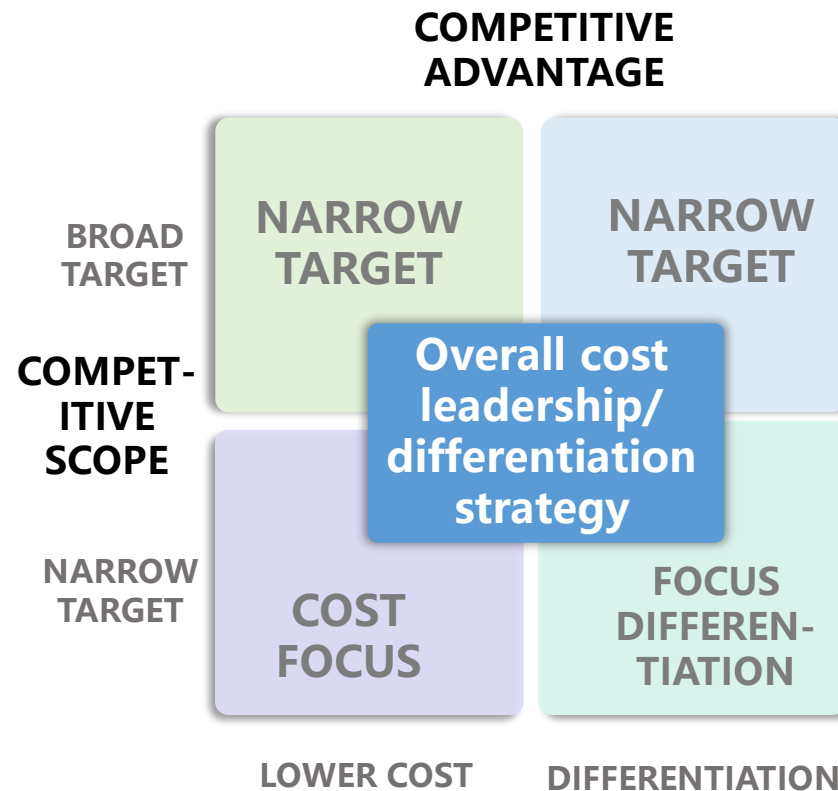
Mission

**Carbon peaking** and **carbon neutrality goals**

1 Sales revenue doubled in three years

2 Return on equity of at least 20%

3 Enter the first tier of domestic suppliers



- ◆ The target customer group is neither wide nor narrow
- ◆ Reduce costs while efficiently producing differentiated products
- ◆ Make timely adjustments to new technologies and changes in the external environment
- ◆ **Cost advantage and differentiation advantage**



# Framework for budgets

Corporate Strategy

Balanced Scorecard

Financial perspective

Customer perspective

Internal process perspective

Learning and growth perspective

Return on equity 20%  
Net profit margin on sales 6.59%  
Total asset turnover 1.15

Retaining regular customer  
Adding new customers

innovation process  
Sustainable development  
Production efficiency

Ability of organizational structure  
Information system

Sales revenue  
Cost of sales  
Expense  
Total asset

Customer Retention ratio  
After-service income ratio  
New Customer Ratio

Environmental expenditure ratio  
Product on-time delivery rate  
Equipment availability

Informatization degree  
Effectiveness of communication and cooperation among departments

Business data

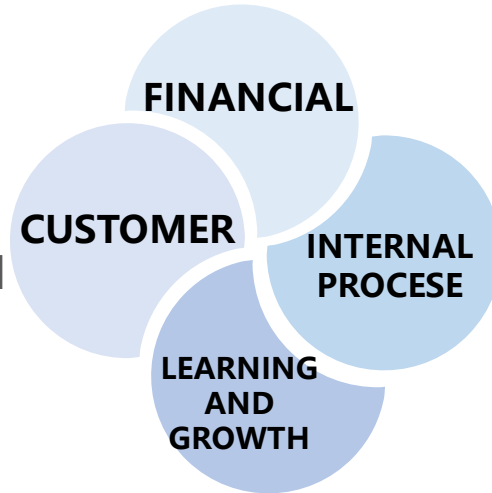
Decompose budgets into different department

External data

Balanced Scorecard

# WHAT IS ?

is a strategic management tool that provides a framework for measuring and managing organizational performance by focusing on four key areas.



Corporate Strategy

Overall cost leadership

- Strengthen cost control
- Minimize the cost of sectors

Differentiation

- Product differentiation
- Service differentiation

**Period**  
Budget for 2022

**Method**  
Incremental budget

**Sales**  
PV industry is in the **blue ocean market, and assume sales increase.**

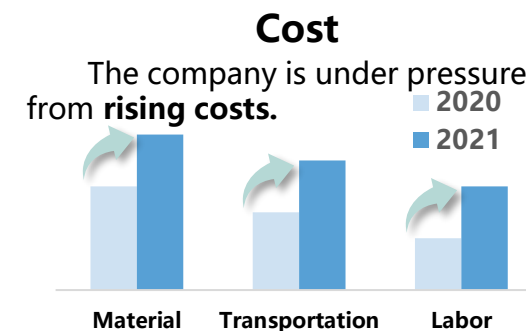
**Operating hypothesis**  
CleanTech adhere to **going concern**

**Market**

- In recent years, the prosperity of the photovoltaic industry has **continued to rise.**
- The overall trend of all links in the PV industry chain is to **reduce costs and increase efficiency.**

**Investment**  
**Increase R&D investment** by 5 million yuan in 2022.

YEAR	R&D Expense
2021	29.1m
2022	40.8m



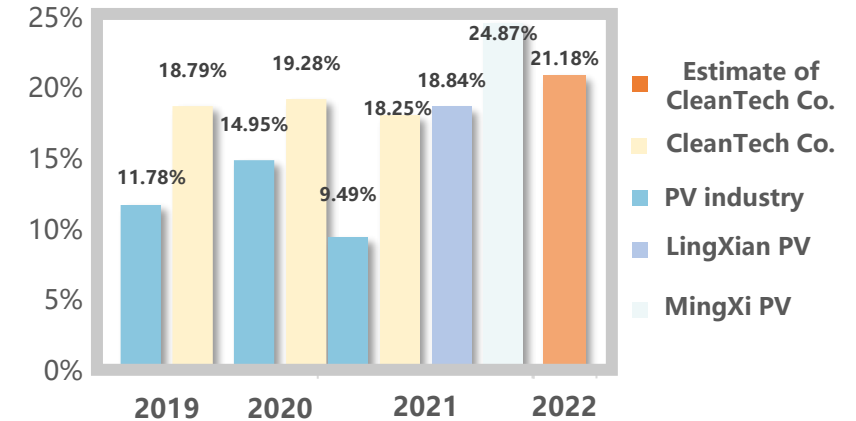
- Legislation**
- Policies and regulations
  - <Financial subsidy retrogression policy>
  - Environmental protection requirements
  - <Zero carbon emission plan>

FINANCIAL

we decompose ROE ratios through Dupont to set up budgets.

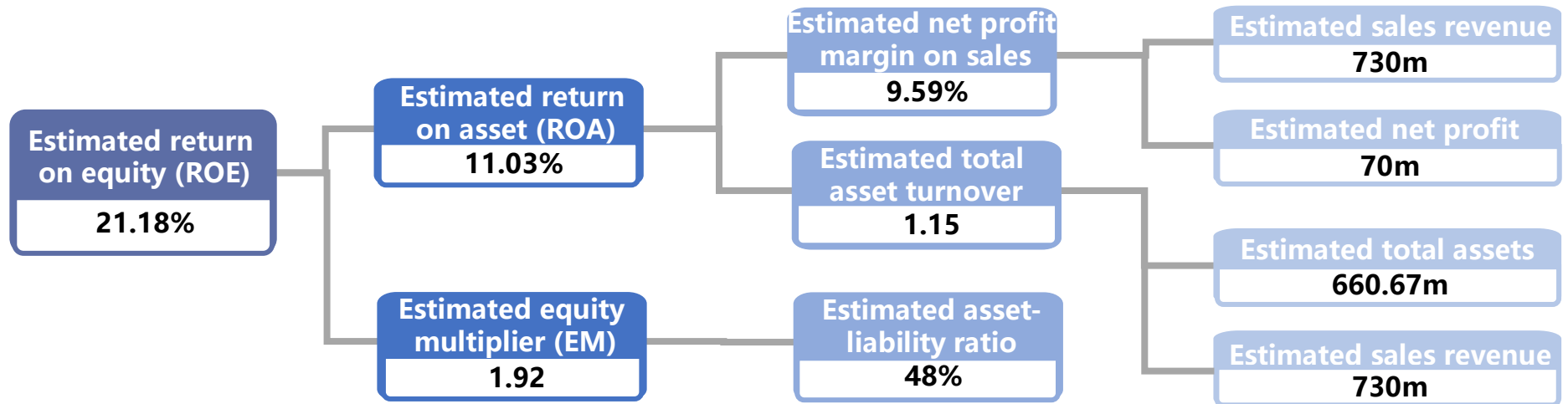
- Higher than average level of PV industry and close to the first echelon
- Has a stable business operation and performs well in midstream industry
- Still has a certain gap and the 20% target of ROE was not met

2022 Estimated ROE



According to the company 's three-year strategic goal, we set the 21.18% estimated ROE for 2022

$$\begin{aligned}
 &\text{Estimated ROE} \\
 &= \frac{PBIT}{Equity} \\
 &= 21.18\%
 \end{aligned}$$



Using  $ROE = Net\ profit\ margin \times TAT \times (1 - Asset - liability\ Ratio)$

to decompose the estimated ratio of 2022 through Dupont to set up budgets.

FINANCIAL

we decompose **Estimated Net profit margin on sales** to set up revenue&cost budgets.

Estimated Net profit margin on sales	
9.59%	
Revenue	Profit
730m	70m

$$Net\ profit\ margin\ on\ sales = \frac{Net\ Profit}{Revenue} = 9.59\%$$

**Budget statement (SPL)**

Budget statement	2021	2022E	change
operating revenue	581.59	730	↑
operating cost	465.84	579.14	↑
gross profit	115.75	150.86	↑
taxes and surcharges	1.59	1.8	↑
operating expense	10.07	11.1	↑
administrative expense	13.67	13.13	↓
R&D expense	29.1	40.77	↑
financial expense	1.68	1.66	↓
operating profit	59.64	82.4	↑
non-business expenditure	0.2	1	↑
total profit	59.44	81.4	↑
income tax	8.17	11.4	↑
net profit	51.27	70	↑

❖ **Sales Revenue:**

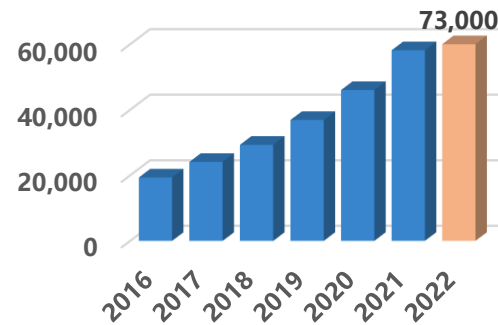
- sustainable **growth**
- The growth rate is **declining**
- Improve revenue

❖ **Cost & Expense:**

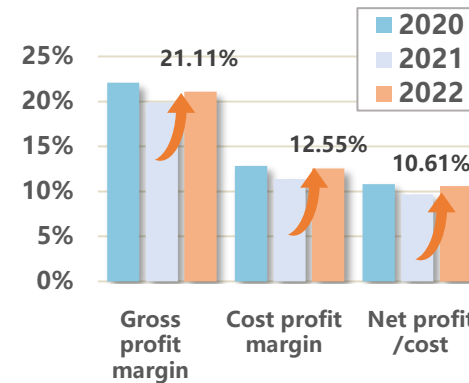
- Increase dropped margin, control operating cost
- **Admin expense, financial expense, operating expense** are predicted to be controlled.



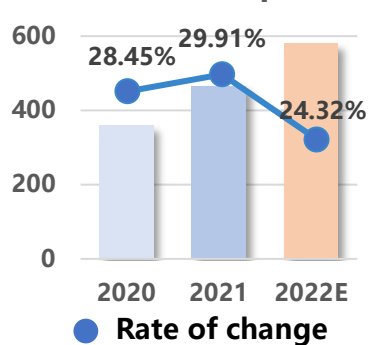
2022 Estimated Revenue



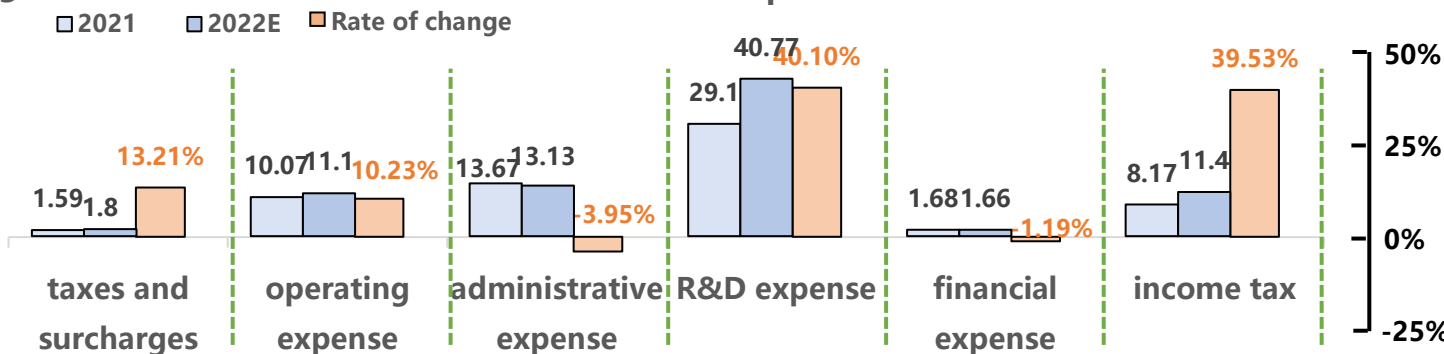
2022 Estimated ratios



2022 Estimated operating cost



2022 Estimated expense





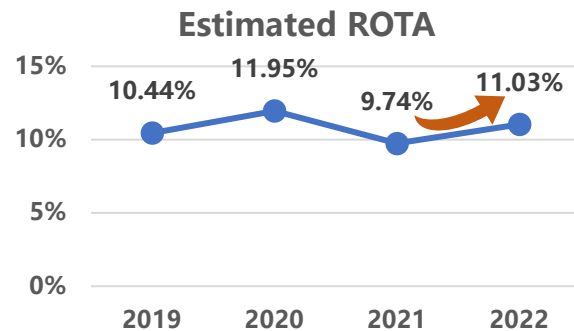
Estimated total asset turnover	
1.15	
Revenue	Asset
730m	660.67m

The asset quality can be improved.

$$\text{Total asset turnover} = \frac{\text{Revenue}}{\text{Average of total assets}} = 1.15$$

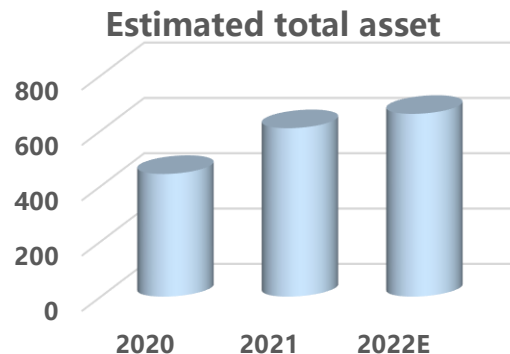
### ❖ Asset profitability

- To restrain downward trend, the estimated ROTA is set a slight increase of **11.03%**



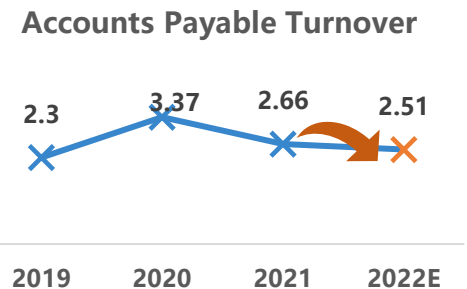
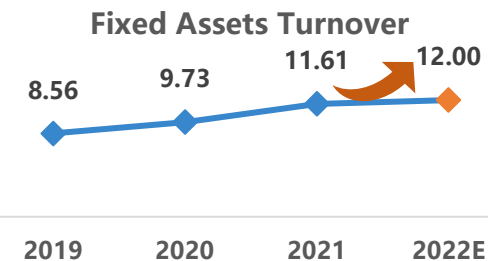
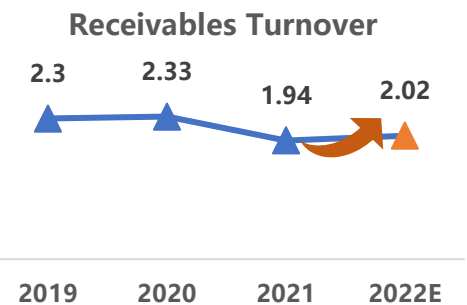
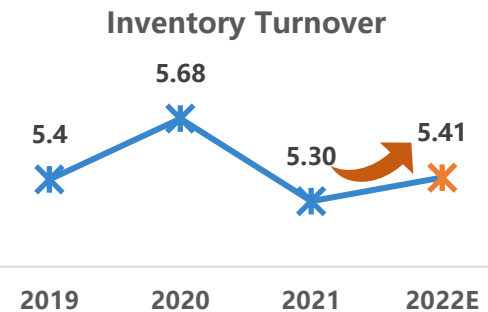
### ❖ Asset growth rate

- As the assumption of TAT, the asset is calculated as **660.67m**



### ❖ Asset turnover

- As the assumption of 1.15 total asset turnover, the receivables turnover, inventory turnover, fixed assets turnover and accounts payable turnover is set to improve.



FINANCIAL

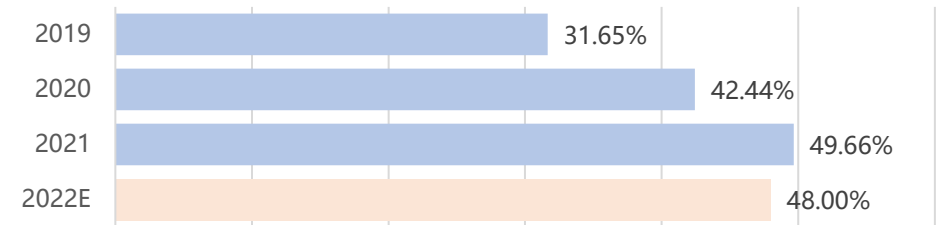
Improve solvency.

$$\text{Asset – liability ratio} = \frac{\text{liability}}{\text{total assets}} = 48\%$$

Estimated asset-liability ratio	
1.15	
liability	Asset
317.12m	660.67m

❖ *Finance target*

- To improve the solvency of cleantech, we set 48% asset-liability ratio.



## Budget statement (SOPF)

Budget statement	2021	2022E	change	Budget statement	2021	2022E	change
Current Assets	539.38	561.42	↑	Current Liabilities	302.38	317.12	↑
Cash	61.01	72.94	↑	Short-Term Loan	12	12	→
Notes and Accounts Receivable	364.69	358.94	↓	Notes payable and accounts	226.95	235.12	↑
Other Receivables	1.4	1.6	↑	Other Current Liabilities	63.43	70	↑
Prepayment	0.74	0.8	↑	Non-current Liabilities	0	0	→
Inventory	100.28	113.93	↑	Long-Term Loan	0	0	→
Other Current Assets	11.26	13.21	↑	Other Non-current Liabilities	0	0	→
Non-current Assets	69.52	99.24357	↑	Total liabilities	302.38	317.12	↑
Long-term Investment	0	0	→	Capital Stock	50	50	→
Fixed Assets	49.89	71.78	↑	Capital Reserves	0	0	→
Intangible Assets	4.9	9	↑	Retained Earning	256.52	263.55	↑
Other Non-current Assets	14.73	18.47	↑	Shareholder's equity	306.52	343.55	↑
Total Assets	608.9	660.67	↑	Liabilities and Shareholder's equity	608.90	660.67	↑



**retaining original customers and adding new customers** become two effective targets for each company to ensure market share due to its fierce competition.

CUSTOMER

Differentiation strategy

❖ *Retaining regular customer*

❑ *Customer loyalty*

PV market ⇒ Competitive buyer's market ⇒ promote the stability of customers

❑ *improvement target*

Customer Retention ratio

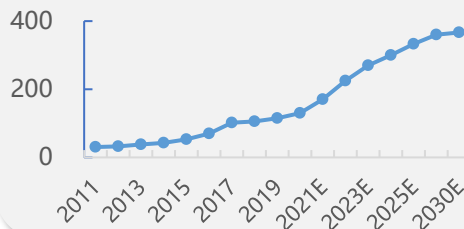
❑ *Service cost*

Characteristics • Organize supply of product maintenance parts. of PV products • Meet urgent needs of special customers. ⇒ Improve after-sales service

After-service income ratio

❑ *Ability to attract new customers*

Prediction of the Compound Growth Rate of PV installations is increasing



Enters non-subsidy era with ordinary price delivered to the national power grid. ⇒ Customer acquisition

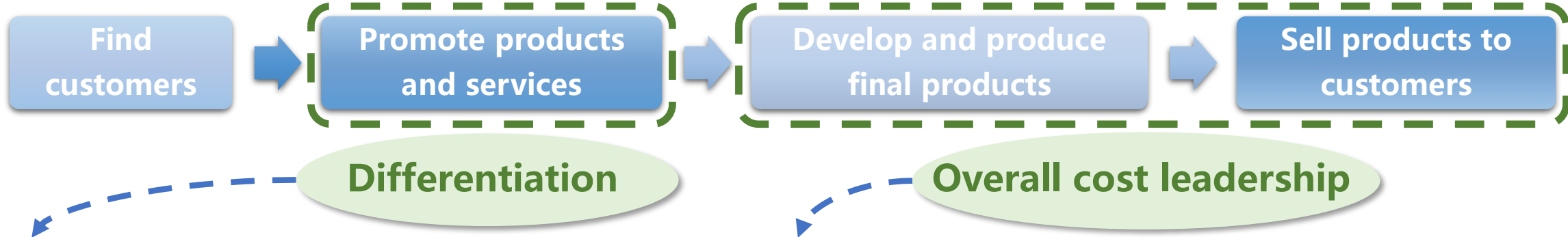
New Customer Ratio

As the Cleantech co. implements differentiation strategy, it is necessary to stabilize the market well through **customer indicators** by promoting the stability of customer groups and the development of new customers.

INTERNAL PROCESSE

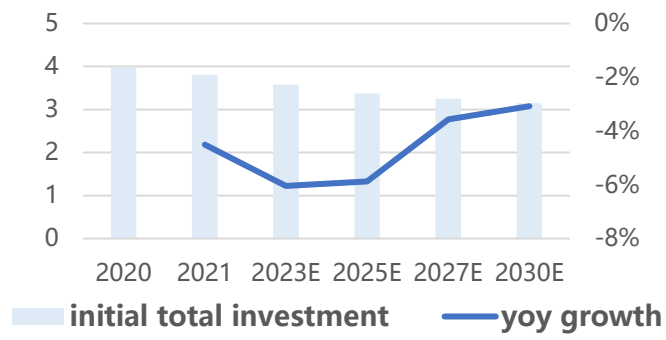
**Innovation and operation process ratios** are set targets due to the decomposition of internal value chain

internal value chain



❖ *Improve innovation process*

❖ *Improve operation process*



The initial investment of PV system is decreasing, which force PV enterprises to **accelerate technological innovation**.



**R&D investment ratio reach 4.9%**

□ **Sustainable development**

The **cost of waste disposal** is a problem that PV enterprises have to consider.



**Environmental expenditure ratio** ↗

□ **Production efficiency**

Ensure the **timely delivery** of the sold junction boxes and connectors to obtain customer satisfaction.



**Product on-time delivery rate** ↗  
**Equipment availability** ↗

LEARNING  
AND  
GROWTH

Improving the level of **human resource** and **informatization** complement the financial, customer and internal business processes, with a focus on improving the quality and capabilities of human resources.

### ❖ *Employee competence*

The number of solar PV practitioners accounts for more than 50% in the country, which has contributed an important force to increase employment.

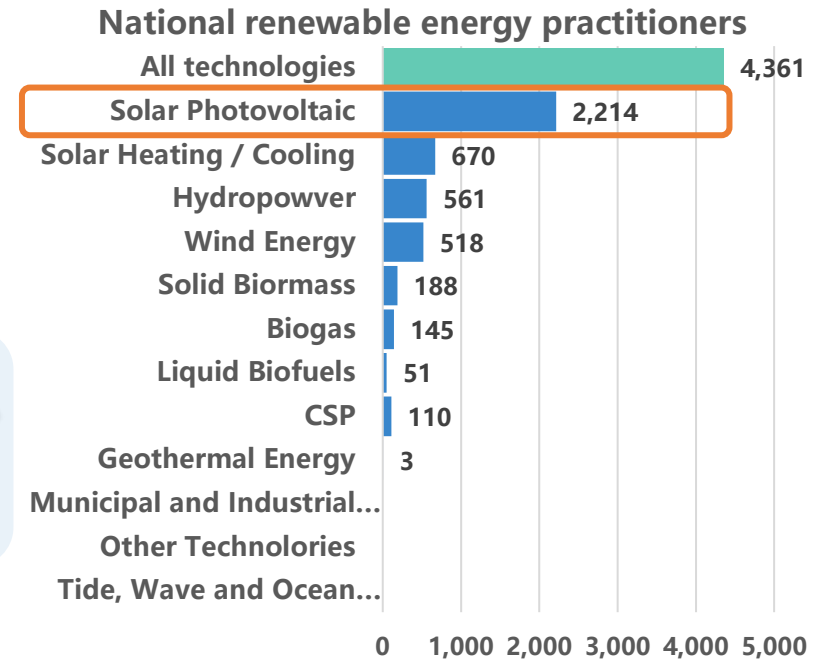
The labor shortage

An increase in temporary employment

The need of sustainable development



The proportion of high-level talents



### ❖ *Enterprise learning ability*

In the process of reducing costs and increasing efficiency, we will face many new problems and use new tools. Through systematic training, internal communication and joint cooperation, the proficiency of employees can be improved.

Long-term  
development

Provide an efficient working platform for employees

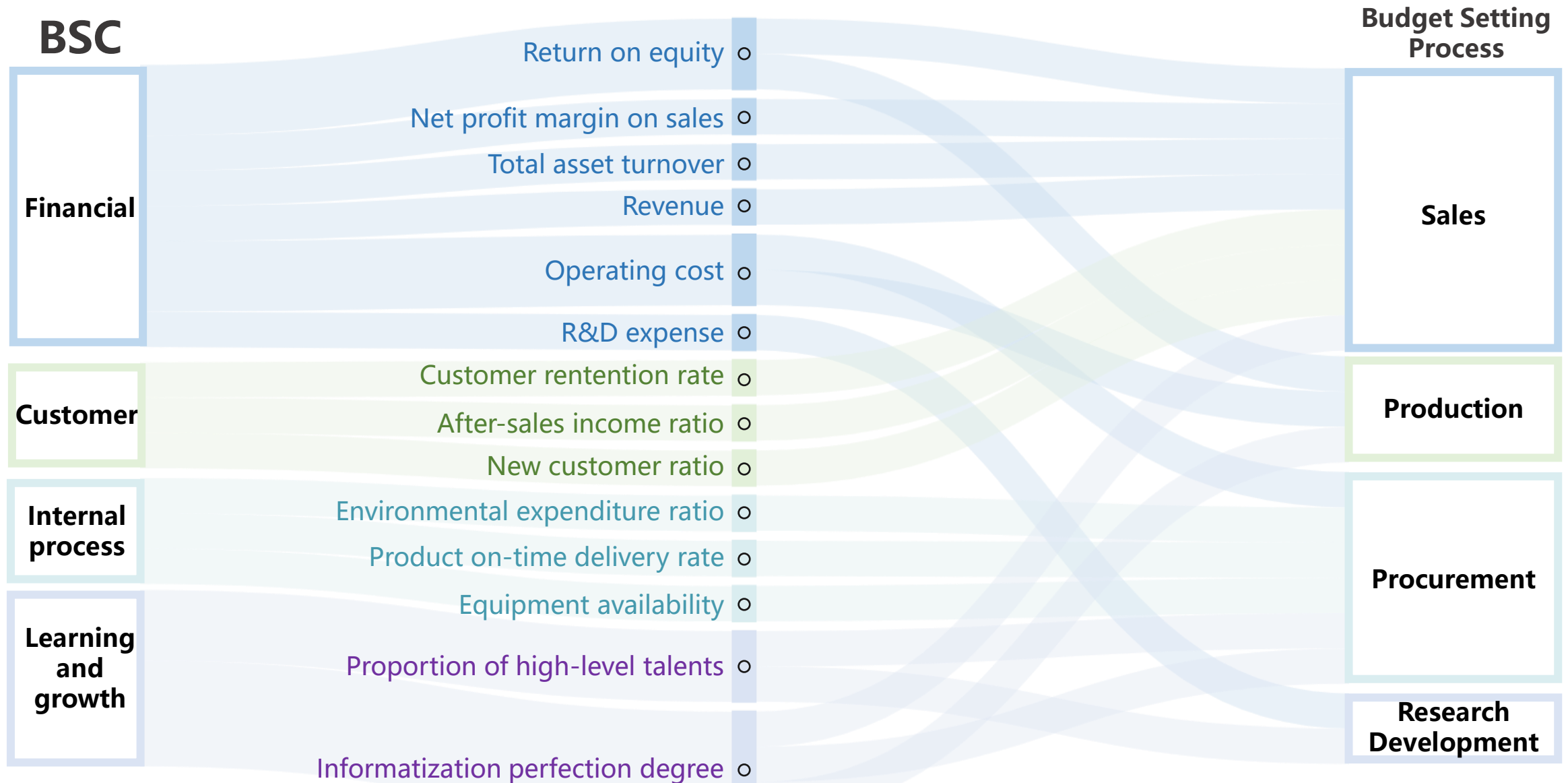
Long-term enterprise management behavior



Informatization  
perfection degree

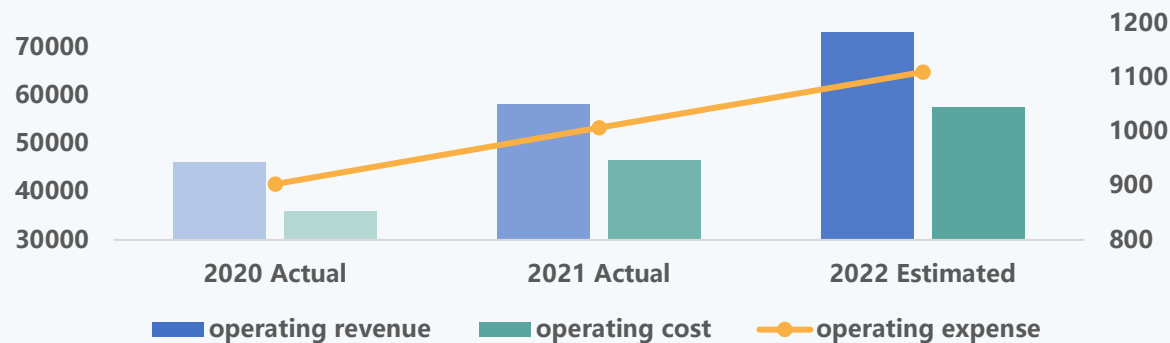


## Budgets Targets Summary



## Sales Department Budget

### Assets Budget



Assets	2020 Actual	2021 Actual	rate of rise	2022 Estimated	rate of rise
operating revenue	46034	58159	26.34%	73000	25.52%
operating cost	35860	46584	29.91%	57590	23.63%
operating expense	903	1007	11.52%	1110	10.23%

**2022 Cost of sales**

**Storage costs**  
**28.79 million**

**transportation cost**  
**57.59 million**

25.52%

Sales revenue target  
**730 million**

Sales unit Price target  
**2%**

**2022 Sales revenue**

Sales volumes target  
**27.21 million**

23.06%

**2022 Sales expense**

Sales expenses target  
**11.1 million**

10.23%

rate of rise

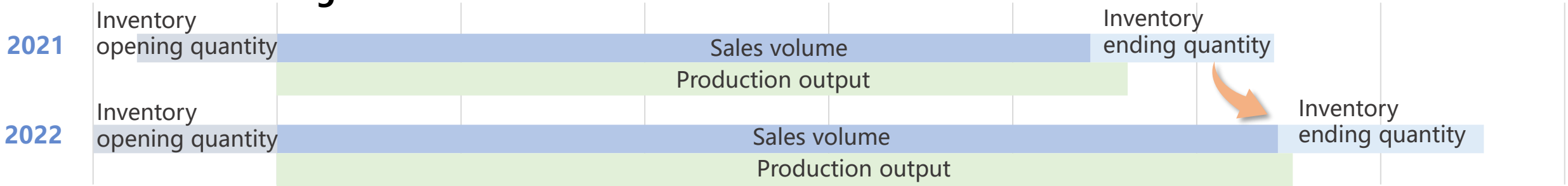
1.29%

### 2022 Operating expense target

Advertising expenses	Promotion expenses	Sales staff salary	Facility maintenance costs
<b>277.5</b>	<b>222</b>	<b>333</b>	<b>55.5</b>
Market research expenses	Travel expenses	Business entertainment expenses	Service training fee
<b>55.5</b>	<b>55.5</b>	<b>55.5</b>	<b>55.5</b>

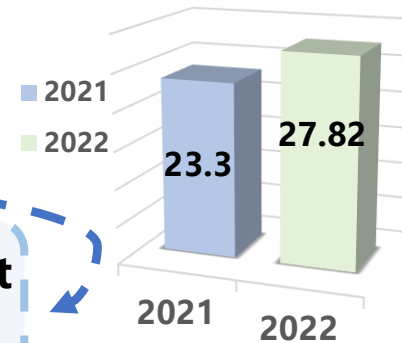
# Production Department Budget

In order to meet the production budget, we decompose the budget to direct material, direct labour and manufacturing cost.



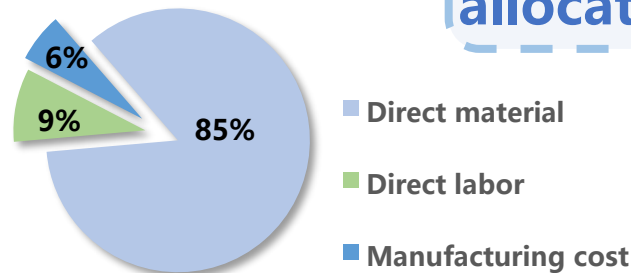
Base on the sales budget and according to inventory assumption, the **production output** can be estimated.

Estimated of production output (million)



Volume	2021	2022
Sales volume	22.12	27.21
Inventory closing volume	4.99	5.60
Inventory opening volume	-3.81	-4.99
<b>Production output</b>	<b>23.30</b>	<b>27.82</b>

The allocation of cost in PV industry



Combined with the forecast of cost allocation and unit cost.

Decomposed into **specific operating cost composition**

Estimated of cost composition (million)

Composition	2022
Direct material	<b>496.62m</b>
Direct labor	<b>49.26m</b>
Manufacturing cost	<b>33.27m</b>
<b>Total operating cost</b>	<b>579.14m</b>

# Production Department Budget

Although base on the empirical assumption:

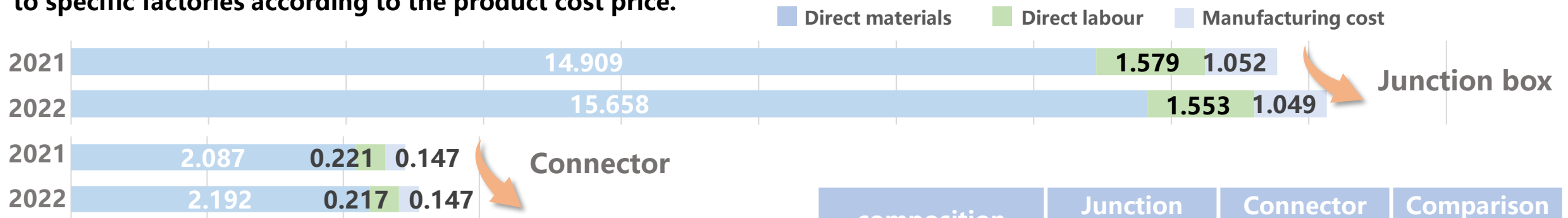
The inference is far more than the budget number.

$$\text{sales volume growth rate} = \frac{S_{2022}}{S_{2021} \cdot (1+2\%)} - 1 = 23.06\%$$

$$\begin{aligned} \text{cost} &= (1 + \text{sales volume growth rate}) \cdot (1 + \text{Cost growth rate}) \cdot C_{2021} \\ &= 596.18\text{m} > 579.14\text{m} \end{aligned}$$

2022 Cost inference model explanation			
Sales revenue	$S$	Sales price	$SP$
cost	$c$	Sales price growth rate	$\frac{SP_{2022} - SP_{2021}}{SP_{2021}} = 2\%$
Sales quantity	$SQ$	Cost growth rate	$80\% \cdot (1+5\%) + 20\% - 1 = 4\%$

In order to meet the production budget, the cost should be reduced to **579.14 m** in 2022 and allocated to specific factories according to the product cost price.



If the direct material decrease 2%, director labor decrease 8.2%, manufacturing cost decrease 7% compared to inference, there is possibility to match 70m profit.

composition	Junction box factory	Connector factory	Comparison to inference
Direct material	435.63	60.99	-2%
Direct labor	43.21	6.05	-8.2%
Manufacturing cost	29.18	4.09	-7%
Operating cost	579.14 million		-2.86%

# Procurement Department Budget

## Procurement annual budget targets

2022 forecast

junction boxes & connectors

sales: 27.22 million sets



recon

production output: 27.82 million sets

unit direct material	
Per budget assumptions	506.75 / 27.82 = ¥18.21
Budget goals	496.62 / 27.82 = ¥17.85

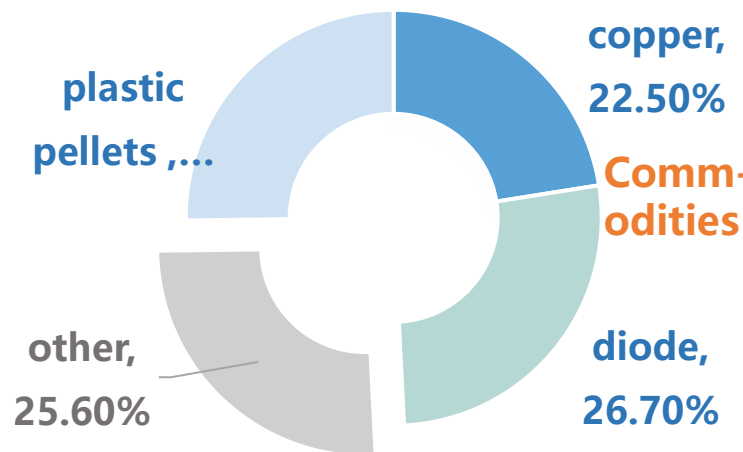
2% ↓

## Copper price forecast for 2022



## Procurement annual budget

### Composition of Raw Materials

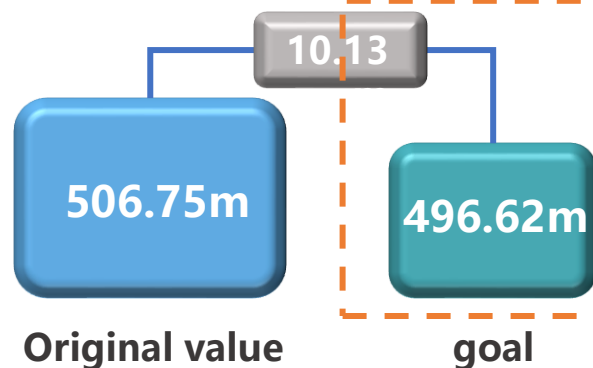


### Allocation of budgetary funds

material	Budget(m)
copper	111.74
diode	132.60
plastic pellets	125.15
other	127.13
total	496.62

- commodities are expected to return to rationality, procurement costs are expected to be reduced.

### Procurement costs



**Risk:** There is still the possibility of large fluctuations in material prices, and procurement cost reduction still needs to find another way.



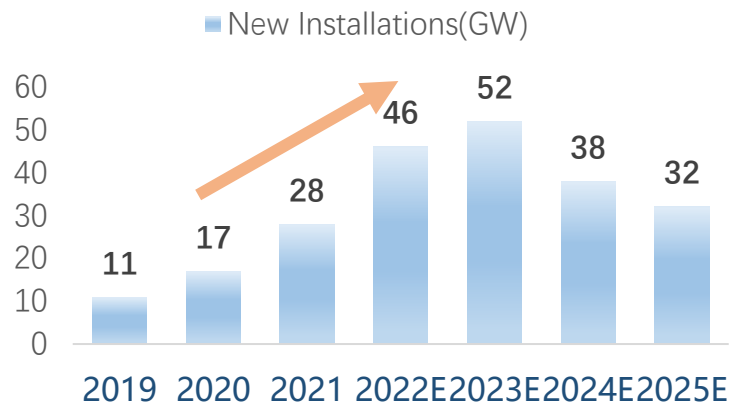
# R&D Department Budget: Develop Intelligent Junction Boxes

14th Five-Year Plan   
 Dual Carbon Goals 



Centralized  Distributed

2019-2025 Distributed PV New Installed Capacity and Forecast



The largest demand side



Maximum power point tracking

Intelligent shutdown guarantees safety



The market outlook is good

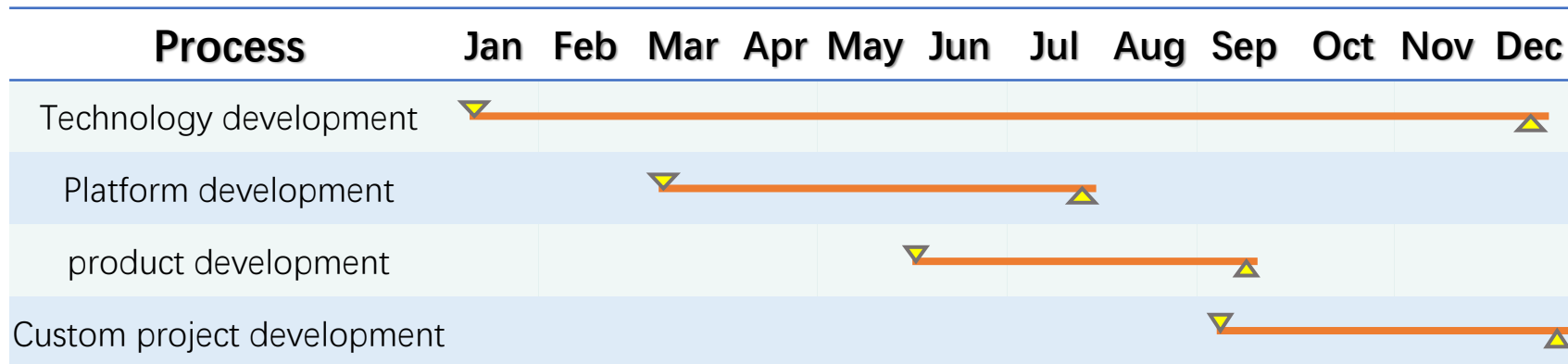


In line with technology trends

Intelligent Junction Box 

 **MATCHING** 

IPD Annual R&D Master Plan

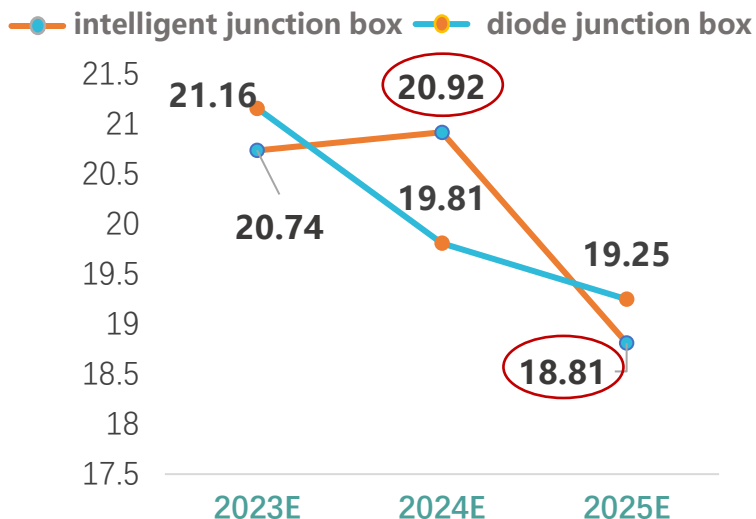


Long-termism 

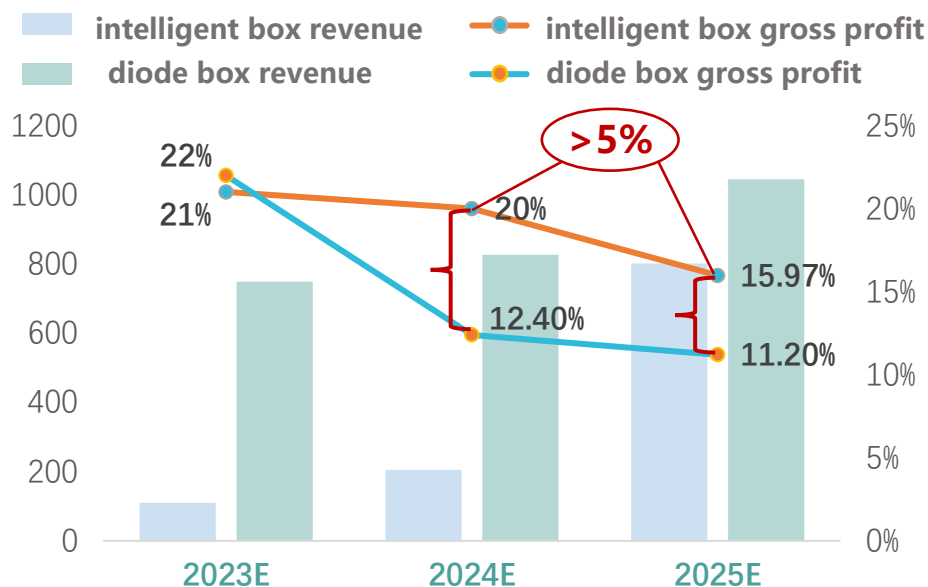
Overall cost leadership/differentiation strategy

# R&D Department Budget: Revenue Analysis of Intelligent Junction Box

2023-2025 Intelligent and Diode Junction Box Unit Price Forecast



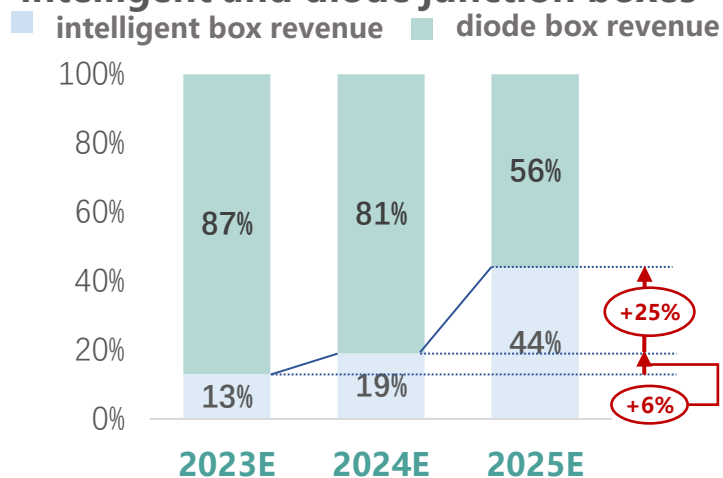
2023-2025 Revenue and gross margin forecasts



## Revenue Analysis

- Diode junction box revenue continued to grow.
- The revenue of the Intelligent junction box **increased greatly** in the later period.
- The **gross profit of Intelligent junction boxes will be 5% higher** than that of diode junction boxes, helping companies achieve **strategic goals**.

2023-2025 sales forecast for intelligent and diode junction boxes



## Sales Forecast

- With product promotion and industry trends, **the proportion of Intelligent junction box sales will increase.**
- The unit price of Intelligent junction boxes can be **increased in the short term**, and the price **will also be reduced** in the later period due to the reduction of scale effect costs.

## Risk Analysis

- The expansion of distributed photovoltaics is less than expected
- Core products cannot be iterated effectively
- Capacity release is not as expected

# R&D Department Budget: Allocation of Budgets

## Budget suggestion

In the R&D expenses of **4.9%** of the sales revenue, another **5 million** budget investment.

R&D budget	revenue budget * 4.9 %	730m*4.9%	total <b>40.77m</b>
	additions	5m	
			<b>5.58%</b> of sales revenue

## What to do with 5 million ?

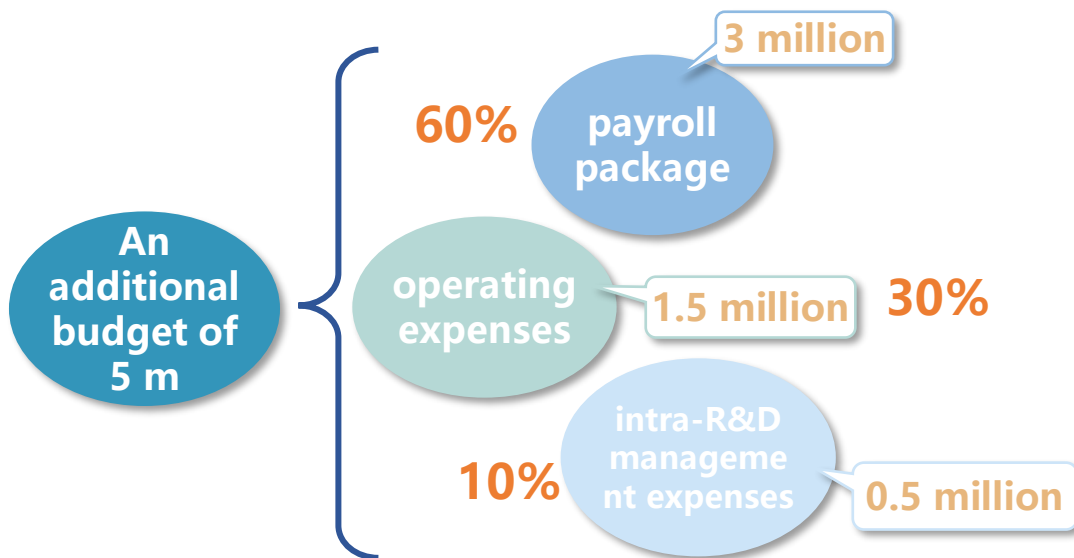
- the research and development of intelligent junction box
- Create an integrated product development model



2023-2025 Intelligent and Diode Junction Box Unit Price Forecast

## Allocation of budgetary funds

### ◆ Allocated by expense category



### ◆ Specific to the stage

In the first year, **the technology development** requires more resources and time.

<b>technical development</b>	<b>55%</b>	<b>product development</b>	<b>35%</b>
<b>1.93m</b>	<b>0.69m</b>	<b>1.14m</b>	<b>0.53m</b>
human resources and material equipment	external spending	human resources and material equipment	external spending
	<b>0.14m</b>		<b>0.5m</b>
	other costs	<b>risk control costs</b>	<b>10%</b>

## R&D Department Budget: Allocation of Budgets

### ◆ Specific to the project

Allocation of R&D expenses in the technology development stage

R&D direction	Project name	investment
Large carrying current	Multi-chip high-current pouring modular junction box project	0.28
	Automatic protection device high temperature test items	0.29
	...	
Product intelligence	Intelligent photovoltaic control system project	0.32
	R&D project of intelligent power optimizer for photovoltaic modules	0.37
	PV module intelligent monitoring, automatic shutdown machineproject	0.42
	...	
Production automation	Low-voltage package automatic protection pouring modular device research and development project	0.32
	Automatic assembly of junction box and intelligent detection system research and development project	0.42
	...	
	total	<b>2.76m</b>

Allocation of R&D expenses during the product development stage

Project	budget
Market management	0.31
Product platform construction	0.12
Solution management	0.28
Product R&D	0.22
product development	0.25
...	...
total	<b>1.76m</b>

- In the technology development stage, we pay attention to the independent research and development of **core technologies and key technologies**, and pay attention to **customer demand mining and product design** in the product development stage

# Framework For Plans



## Budget



## Break Down Into Each Department

## Department Goals

**Total budget**



 **R&D Department**



**Keep investing in R&D**  
**Differentiating advantages**

**Balanced Scorecard**



 **Procurement Department**



**Reduce procurement costs**

**Overall cost leadership/  
differentiation strategy**



 **Production Department**



**Reduce production costs**



 **Sales Department**

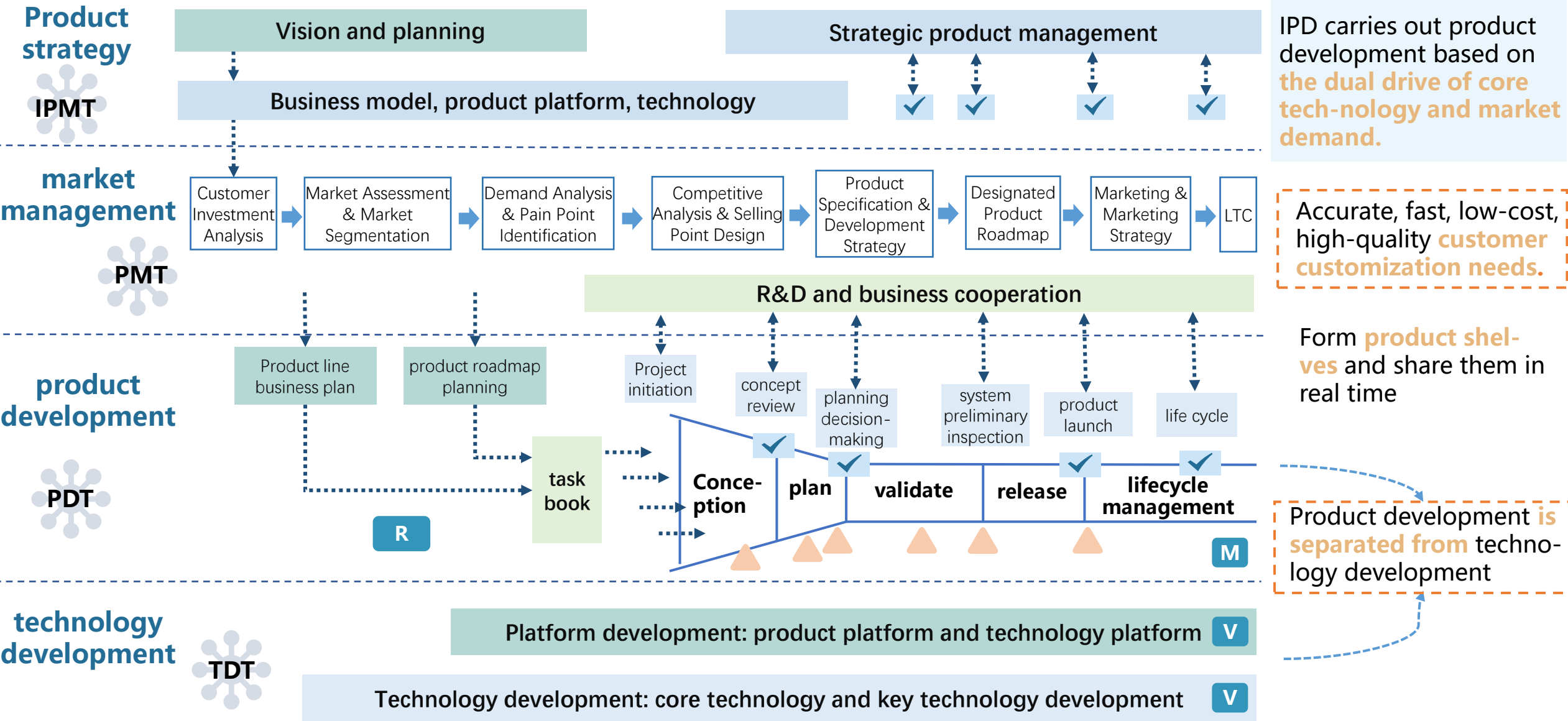


**Increase sales revenue**

 **Information Management**

**Improve Information Management**

# R&D: Create an IPD Development Process



IPD carries out product development based on the dual drive of core technology and market demand.

Accurate, fast, low-cost, high-quality customer customization needs.

Form product shelves and share them in real time

Product development is separated from technology development

# R&D: Technology Development VS Product Development

- **Focus on technological innovation and exploration** : The work in this stage is mainly to **verify the feasibility of technology** and **carry out technological innovation**, and the specific needs and details of the product are not paid high attention.
- **Long R&D cycle and high risk**: Technology development requires a large number of **tests and laboratory tests**, and the cycle is long and the risk is also high.

## Management focus

product design

market analysis

teamwork

R&D progress control

basic  
research

application  
development

project  
development

product  
development

solutions

services &  
Operations

## Technology Development

### Management focus

technology innovation

knowledge management

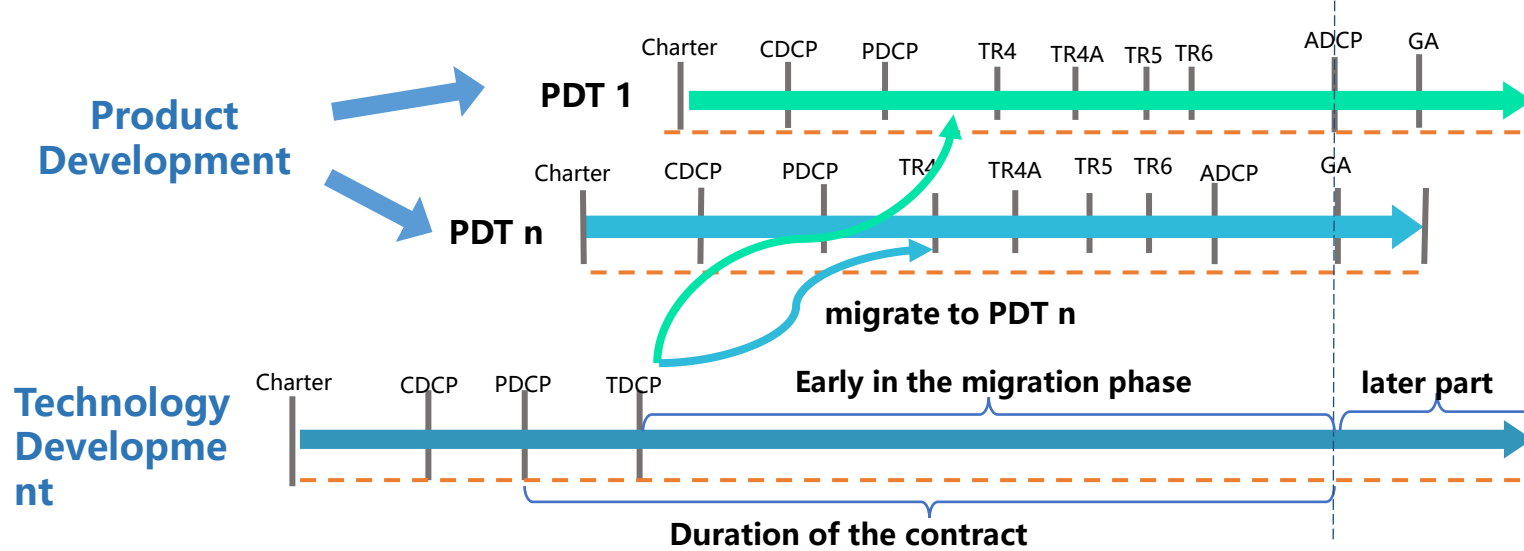
risk control

protection of intellectual property rights

## Product Development

- **Focus on market demand and user experience** : The work in the product development stage is mainly to **meet market demand** and **improve user experience**, and it is necessary to fully understand user needs and market trends.
- **The R&D cycle is relatively short and the risk is low** : The work in this stage is carried out on the basis of the technology development stage, **the cycle is relatively short**, and the risk is relatively low.

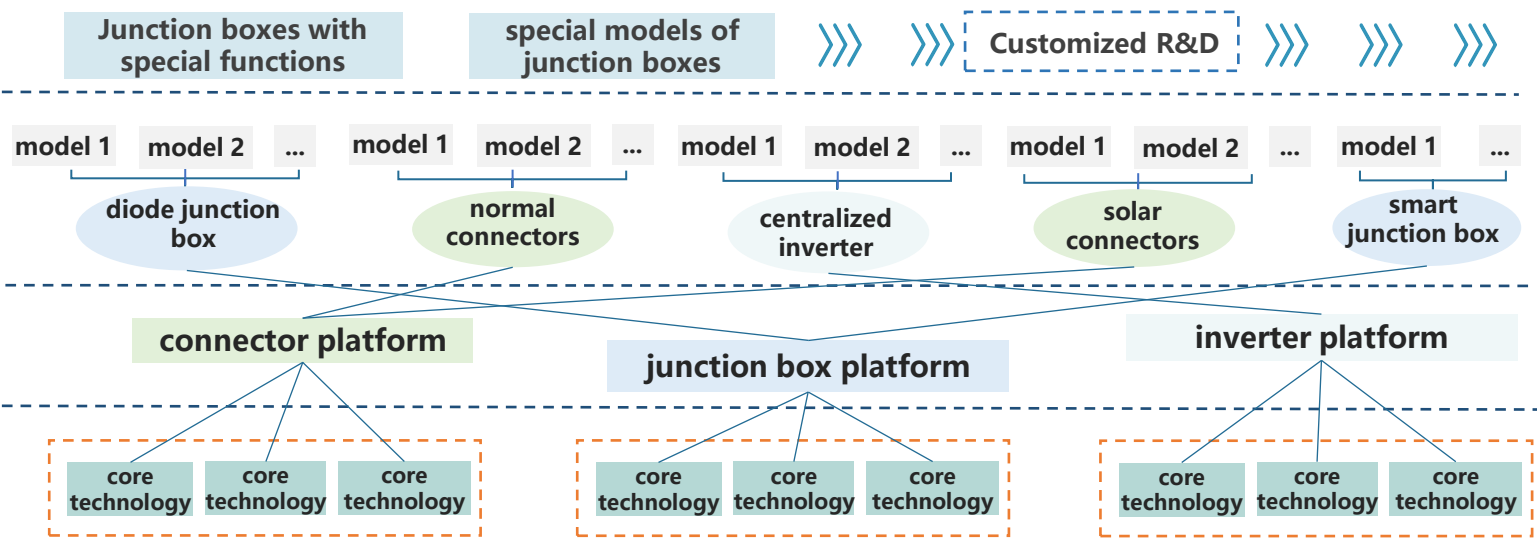
# R&D: Technology & Product Modularization



## Technology & Product Modularity

- Technology development projects and product development projects are **interdependent**, core technologies support product development.
- the sharing of technologies and products creates a **thin waist shelf ecological architecture**.

## Clean Tech Slim-waist Product Ecological Architecture



Enterprises have a common **shared R&D foundation** to meet customer needs and obtain greater profits.

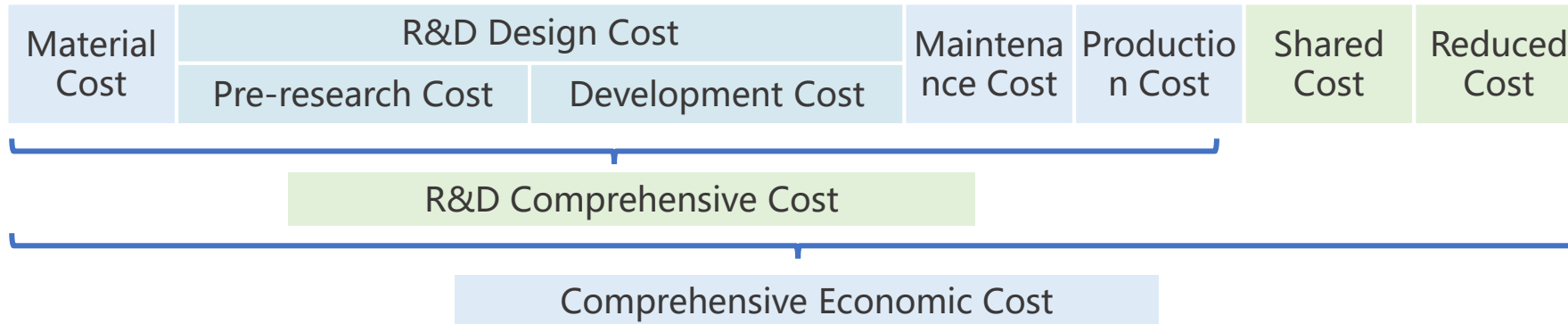
- Customized**
- Product Line & Products**
- Product platform**
- Technology development**

**Clean Tech** divides the core technology into multiple **modules** according to junction boxes, connectors and other products to achieve **technology sharing**. It can quickly respond to each product line, and accurately respond to **customer needs** to **reduce costs and increase efficiency**.



# R&D: Integrated Economic Cost Control

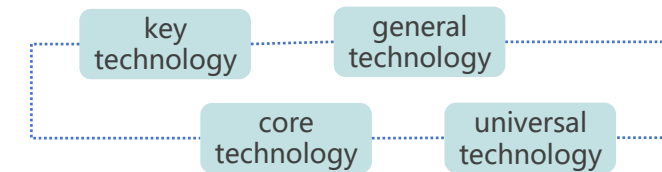
## Integrated Economic Cost Model



### Demand Division



### Technical Division



#### Precise development

- ✓ Through **market demand and planning**, we will develop products that accurately meet customer needs and avoid costs caused by **overdevelopment**.

#### Technical classification

- ✓ **Independent development** of core technologies and key technologies, **outsourcing** of general technologies and general technologies to reduce R&D costs.

#### Design cost control

- ✓ Inherit **shared modules**, optimize BOM inventory, allocate redundancy, and reduce design costs

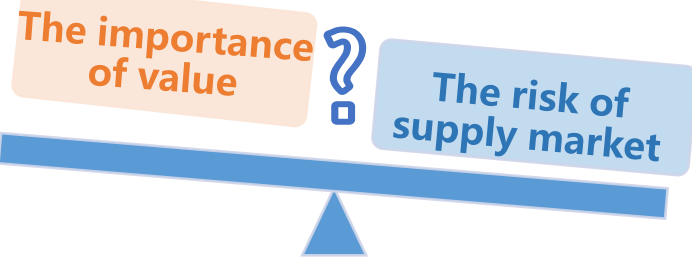
#### Product sharing and shelf

- ✓ **Reduce the types of parts**: bulk purchase agreements, improve manufacturing operation efficiency
- ✓ **Reduce** parts with special requirements

#### Development and manufacturing cost control

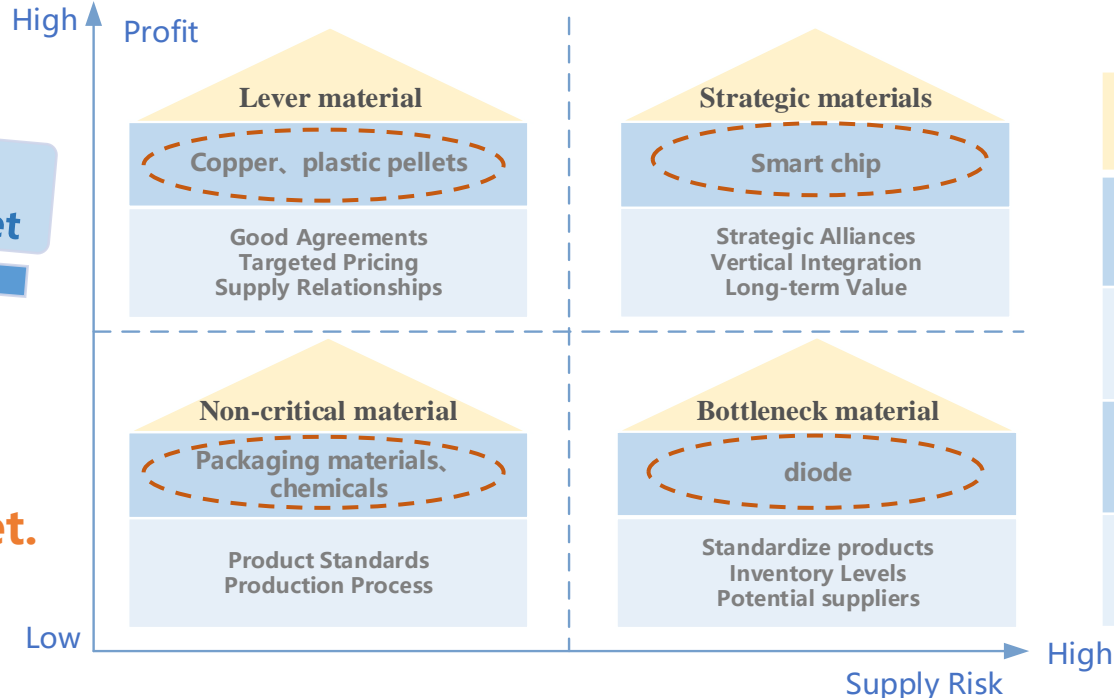
- ✓ Strict technical review, **avoid rework costs**, adopt business analysis and early warning, and **strengthen cost control**.

# Procurement: Refine Material Classification



**Kraljic Matrix** evaluates the importance of its value and the risk of the supply market.

Kraljic Matrix material classification model



Optimal Purchasing Strategy based on material Classification

Material type	Purchasing strategy
Non-critical material	Quantitative ordering
Lever material	Regular order
Bottleneck material	VMI
Strategic materials	Upper limit order

The materials are classified and different purchasing strategies are adopted for different types of materials.

## Material purchasing cycle management



# Procurement: Hedging to Avoid Risk



commodities

large supply and demand

prices fluctuate greatly

great social impact

**Plight**



**inflation:** Buy as much as you want...

**plummeting:** Ramp up reserves or wait ?

**Solution**

**Hedging with futures**



Copper futures are the main ones on the Shanghai Futures Exchange

## Hedging process

1

hedging strategy



share

vendor

determine final material pricing

2

the vendor proposes a target price



spot lock-in

assist customers to lock in prices

3

the customer cannot commit to locking in the price

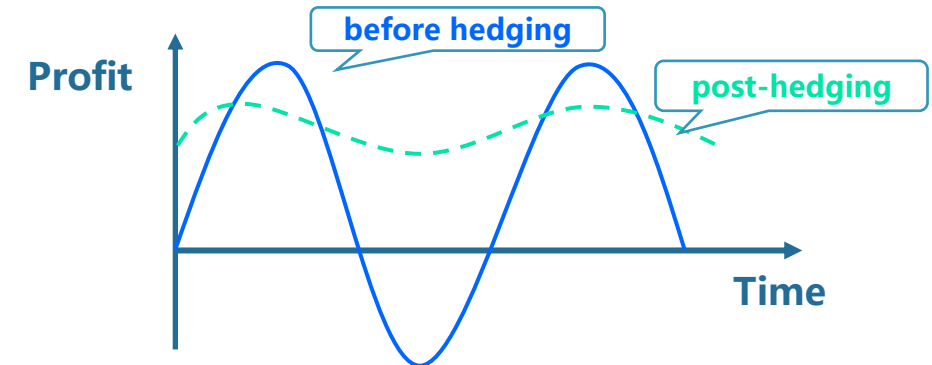


futures lock prices

Shanghai Futures Exchange

use copper futures as a hedging

- **The raw material price linkage** mechanism carries out futures hedging business in a **timely and appropriate** amount according to the trend of futures and spot prices, combined with the company's **production needs**.



## An effective risk management system

- smoothing out price fluctuations ✓
- reducing operational risks
- the rise in copper prices has no impact on new orders
- avoid the impact of market price fluctuations on the company

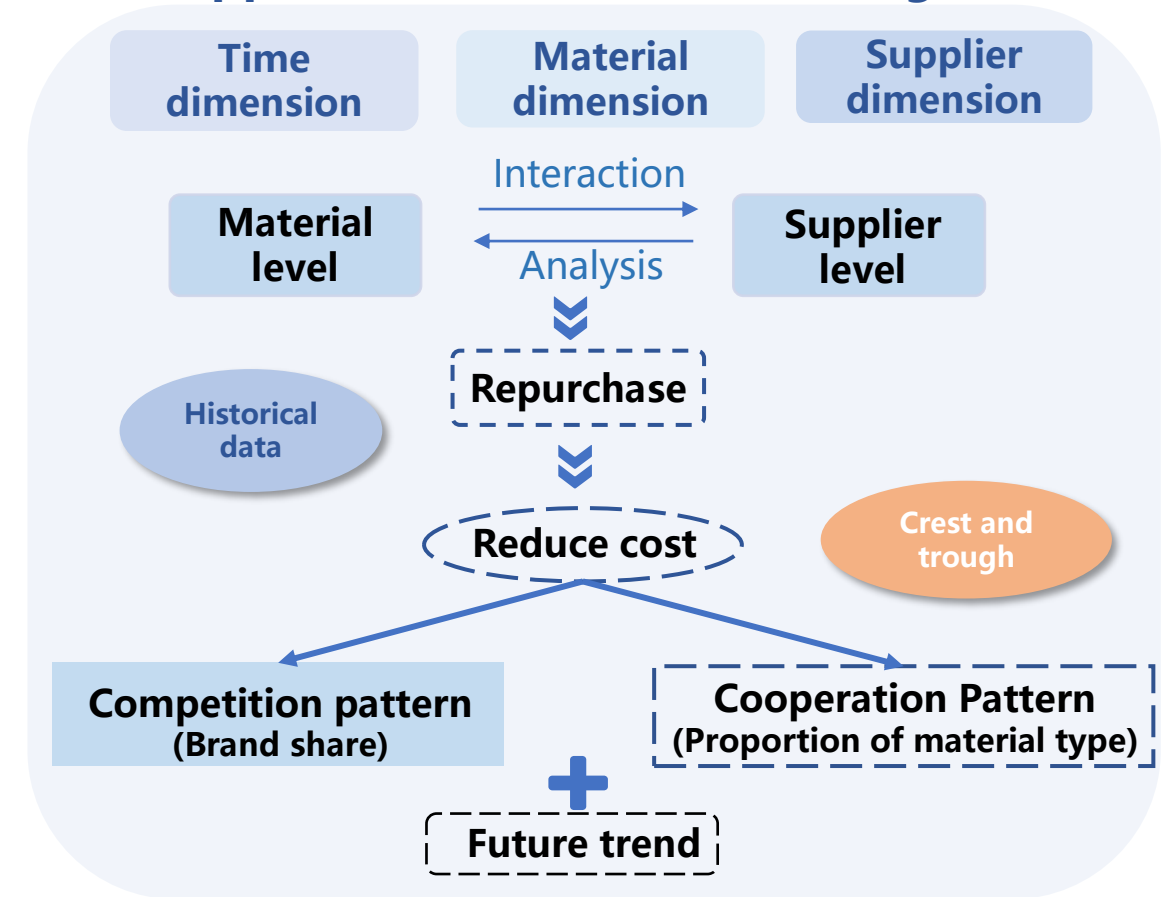
# Procurement: Supplier Data Management

## Supplier selection and management

- **Supplier Classification**
  - ✓ Classify suppliers according to the combination of **risk** and **expenditure**.
  - ✓ Targeted management.
- **Supplier Evaluation**
  - ✓ Evaluation of **supplier quality, production, materials and management system**.
  - ✓ Judge the potential of suppliers.
- **Supplier Selection**
  - ✓ Based on the **historical performance of suppliers** and the **potential of evaluation**.
- **Supplier performance management**
  - ✓ Statistics and management of **supplier performance indicators**.
  - ✓ Assist suppliers to make continuous improvement

➔ Integrate key suppliers into the company's supply chain

## Supplier "data decision-making"

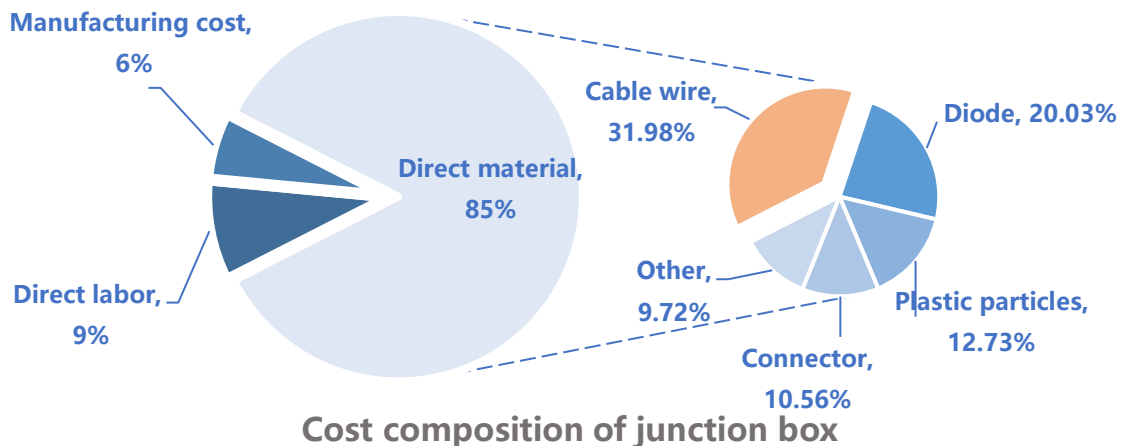


Promote **supplier big data analysis**, "speak with data", and deeply excavate the hidden **value of procurement data** analysis.

# Production Link: Optimize the Production Line

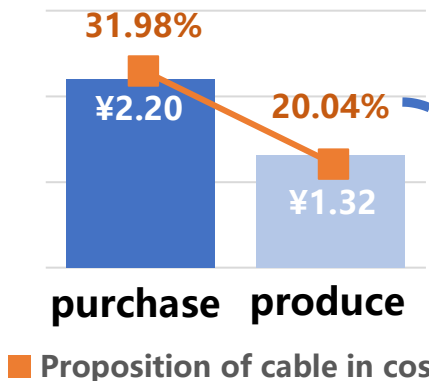
In order to improve cost control, increase the proportion of cable self-production and transform the automation of production.

## Home-made cable wire



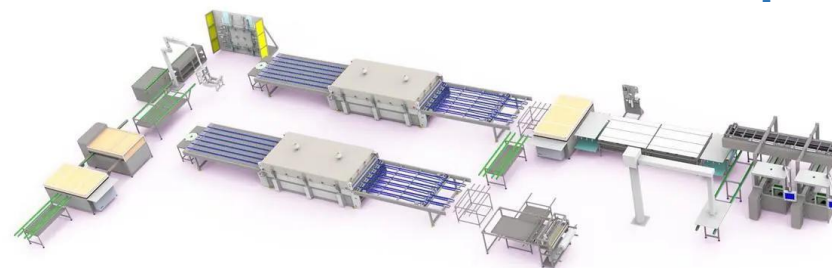
The use of cable wires in direct materials accounts for a large proportion.

Self-produced cable wires

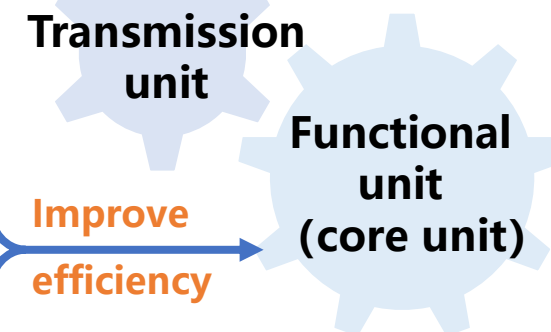
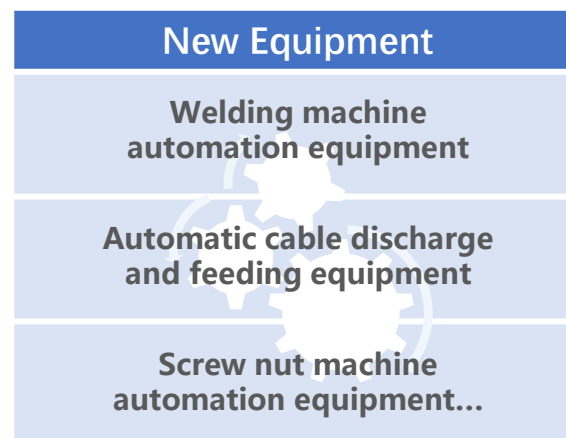
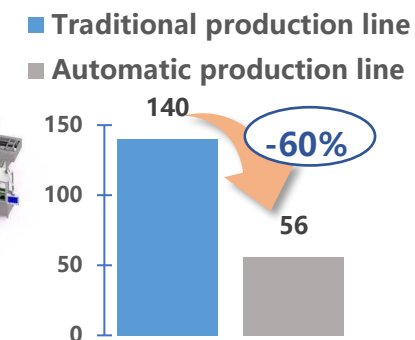


Striving to achieve 80% self-production and self-use of cable can lower its proposition, which can expand the upstream extension and reduce the unit cost of products.

## Transform the automation of production line



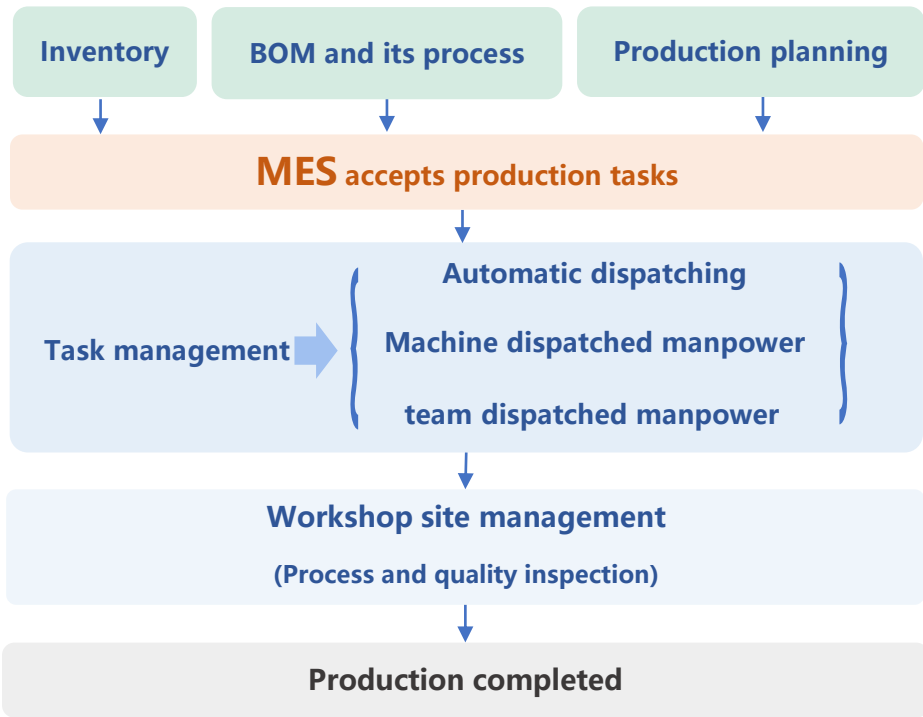
Automation of production line



Promoting the construction of automatic production lines can save at least 60% of the labor force and improve the rate of on-time delivery.

# Production Link: Flexible Production Control

## Intelligent Management of production process

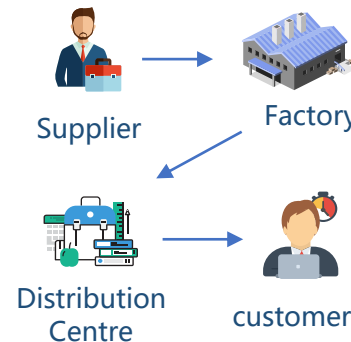


## MES

Carry on the information management to the production process to realize the management and control of the whole production process.

## Master production plan

Throughout the supply chain, increase the balance of supply and demand of each node



## APS

## Order plan

- Order scheduling
- Schedule production by material
- Workshop planning
- ...

## Integration plan

- System Integration based on data Integration
- Integrated planning and scheduling service

## Overall blueprint

Business

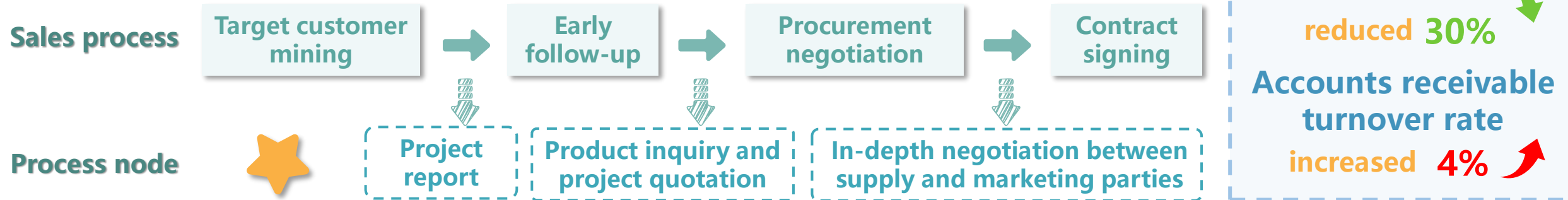
Platform

Guarantee

Obtain accurate production basic data and production business management requirements of MES, integrate MES and APS to simplify production process and improve production efficiency.

## Sales Strategy: Optimize Sales Process

### Clearly define process nodes



### Refine sales follow-up process

- ◆ Define the follow-up steps of sales business process
- ◆ Design sales follow-up tools
- ◆ Optimize customer demand analysis

- Clear responsibility
- Control the sales process
- Improve sales management
- Monitor sales performance
- In-depth understanding of customer needs
- Improve customer satisfaction
- Simplify the quotation process
- Improve quotation accuracy

### Improve the sales quotation process

- Establish a checklist-based process and optimize the approval process of sales quotations

Establish *the Technical Parameter Checklist*



## Sales Strategy: Expand the Market

The sales model is in full force

*Direct sales mode*

+

*Distribution mode*

+

*OEM/ODM mode*

+

*E-commerce mode*

According to different conditions, adopt different sales model

Various sales models are combined and adjusted to *meet the needs of different customers*, *improve the flexibility of sales*, and *expand the market coverage and depth*.

## Multi-party cooperation

Government

Banks

Enterprises



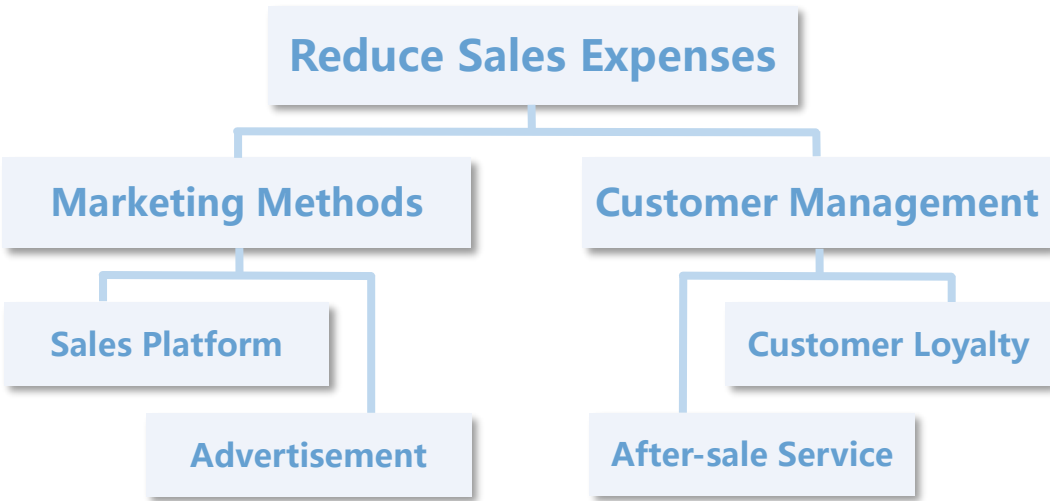
Integrate resources of all parties  
to form  
*a complete photovoltaic industry chain*

- ◆ Obtain government support and preferential policies
- ◆ Access to loans and financing
- ◆ Expand the market and sales channels of photovoltaic enterprises

Sales volumes increased **23.06%** ↗  
 Brand awareness increased **23.06%** ↗  
 Sales risk reduced **30%** ↘



# Sales Strategy : Reduce Sales Expenses



## Sales Platform

- Establish *e-commerce platforms* to reduce sales costs.
- Reduce sales expenses through *automated tools* and *sales management software*.



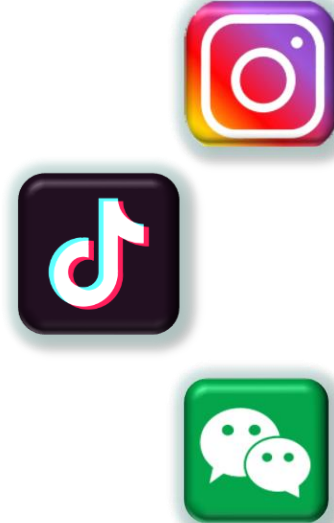
## Advertisement

- Enterprises can conduct digital marketing through *websites, Tik Tok, WeChat official account, WeChat video number* and *other channels*.
- Attract *new customers* in these ways.

	2021	2022
<b>Customers</b>	1,200	1,500



Customer-level Budget Indicators	
<b>New customers</b>	300
<b>New Customer Ratio</b>	20%
<b>Attract Customer Cost</b>	224.6



**CleanTech**  
Chongqing

Bio: 🏢 CleanTech is a high-tech electronic manufacturing enterprise supporting the production of photovoltaic m...  
Show more  
IP: Chongqing  
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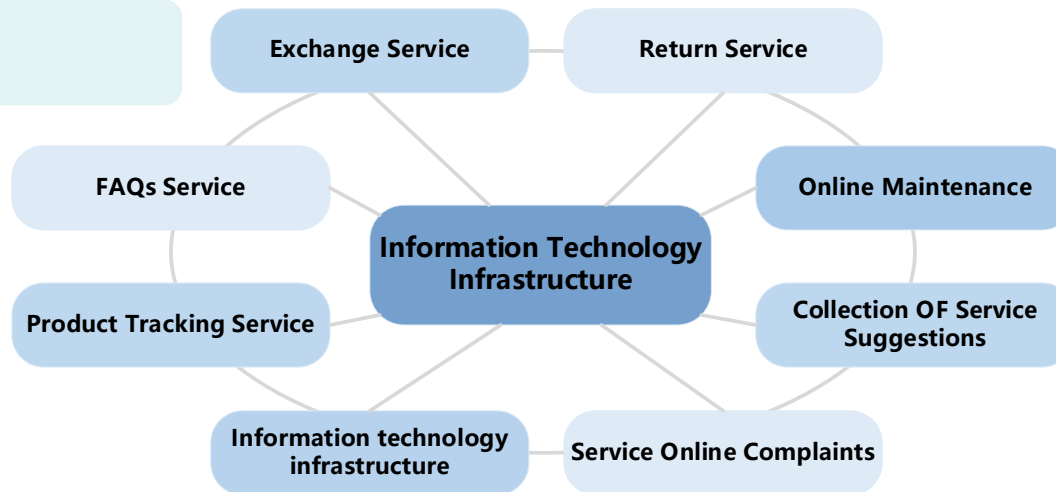
Videos Drafts

distributed generation ✨ ✨  
CleanTech  
SOLAR PV M  
Solar PV On-Grid  
Market Size (2022)  
>340 GW  
Global Installed Solar PV  
CAGR (2019-2022) >4%  
Residential End Use Segment  
>\$26 BN (2022)  
North America Share  
>4% CAGR 2022-2032

# Sales Strategy: Reduce Sales Expenses

## After-sale Service

➤ Enterprises can reduce sales costs and maintain customer relationships by establishing *after-sales service centers*.



## Cost of After-sales Service

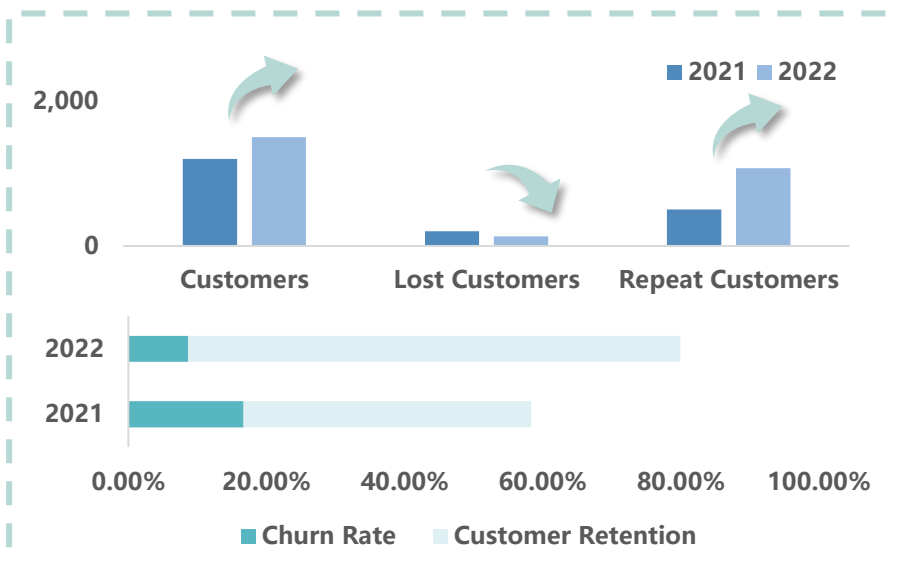
	2021	2022
Cost of Construction	/	196.525
Cost of Maintenance	/	84.225
<b>Total Cost</b>	251.75	280.75
<b>Cost Income Ratio</b>	0.43%	<b>0.38%</b> ↓

## Customer Loyalty

➤ *Establish customer files*, track customer needs and feedback, and reduce *customer turnover rate*.

➤ *Provide after-sales service*, solve customers' problems and needs, and improve *customer return rate*.

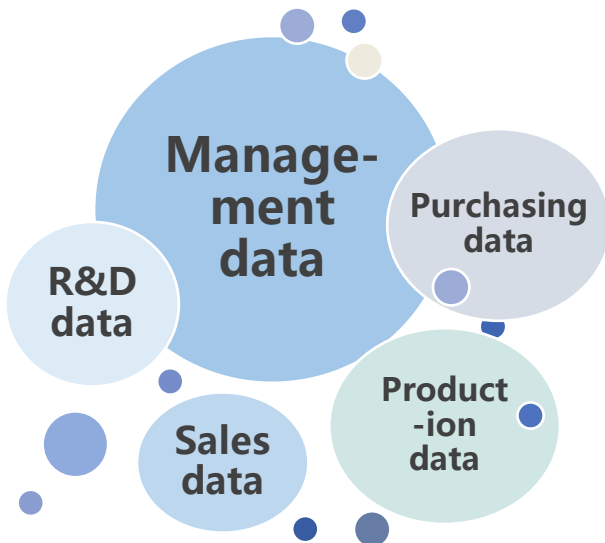
Customer Loyalty		
	2021	2022
Customers	1,200	1,500
Lost Customers	200	130
<b>Churn Rate</b>	16.67%	8.63%
Repeat Customers	500	1070
<b>Customer Retention</b>	41.67%	71.33%



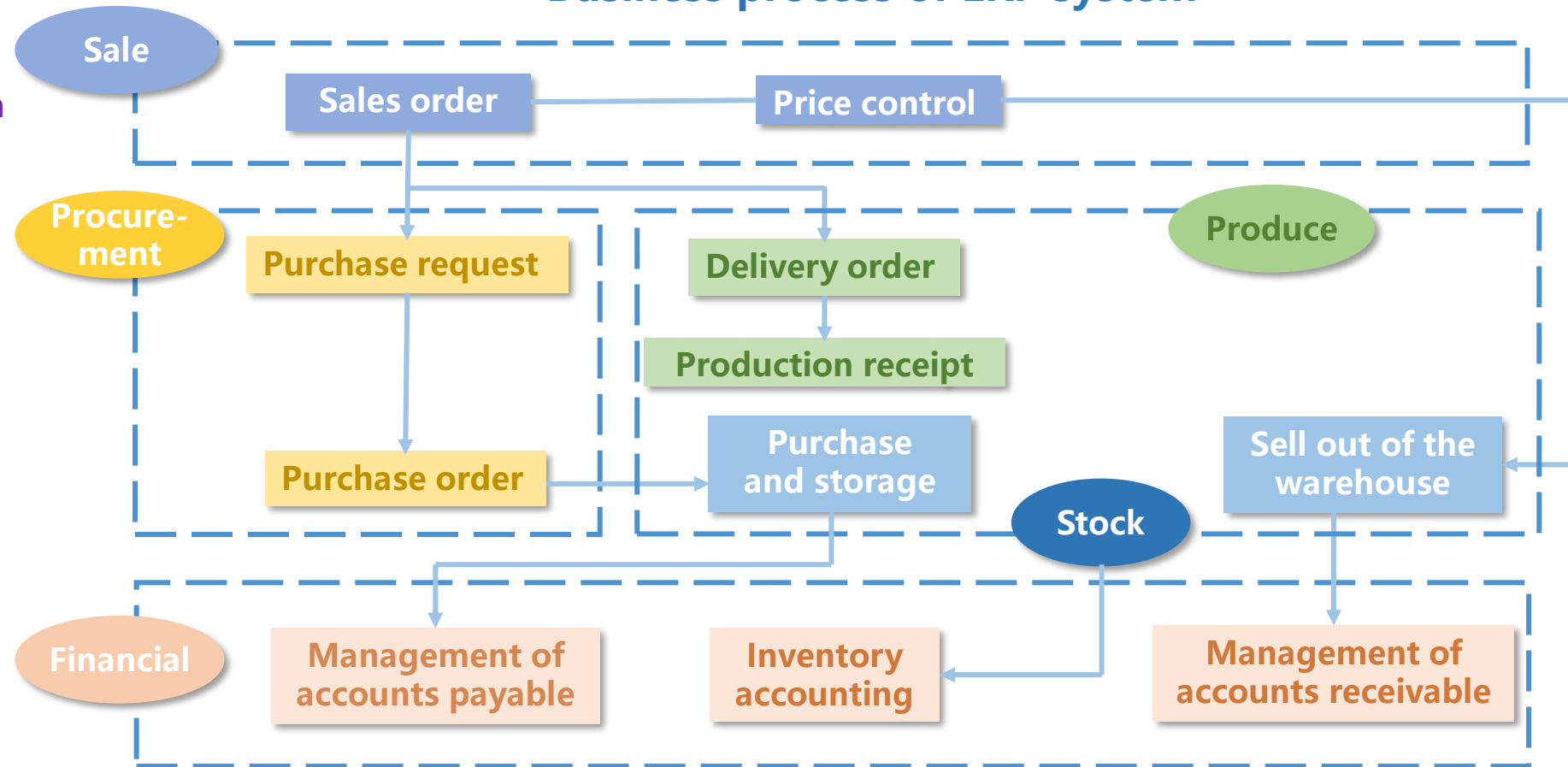
# Information Management System



Build a shared information management platform



## Business process of ERP system



Avoid the phenomenon of information asymmetry within the company

Improve the operating efficiency of enterprises



# Summary For Solutions

## CleanTech's Total Budget Target

Balanced Scorecard

Budgets for each department

**Business Strategy: Overall Cost leadership/Differentiation Strategy**

R&D department

Procurement department

Production Department

Sales Department

- Build the IPD process
- Slim-waisted ecological
- Economic cost control

**Keep investing in R&D**  
**Differentiating advantages**

- Strategy optimization
- Commodity hedging
- Supplier big data

**Reduce procurement costs**

- Automated production line
- Self-produced cables
- Flexible production control

**Reduce production costs**

- Sales process optimization
- Expand the market
- Reduce Sales Expenses

**Increase sales revenue**

**Intelligent information management system**

Business data

External data

# BISS – Budget Implementation Supporting System

Action path

Global analysis, overall optimization

System planning to avoid risks

Budget Target

Budget implementation path

High-level conference management

Budget assessment of the target plan

Business analysis

Process system/organization

Finance/HR/Administration/...

R&D

Purchasing

Sales

Production

Service

Process standardization knowledge management

IT planning/data standardization

IT selection/implementation

IT evaluation & continuous improvement

Performance monitoring & high-level decision-making

Systematization of supply chain management

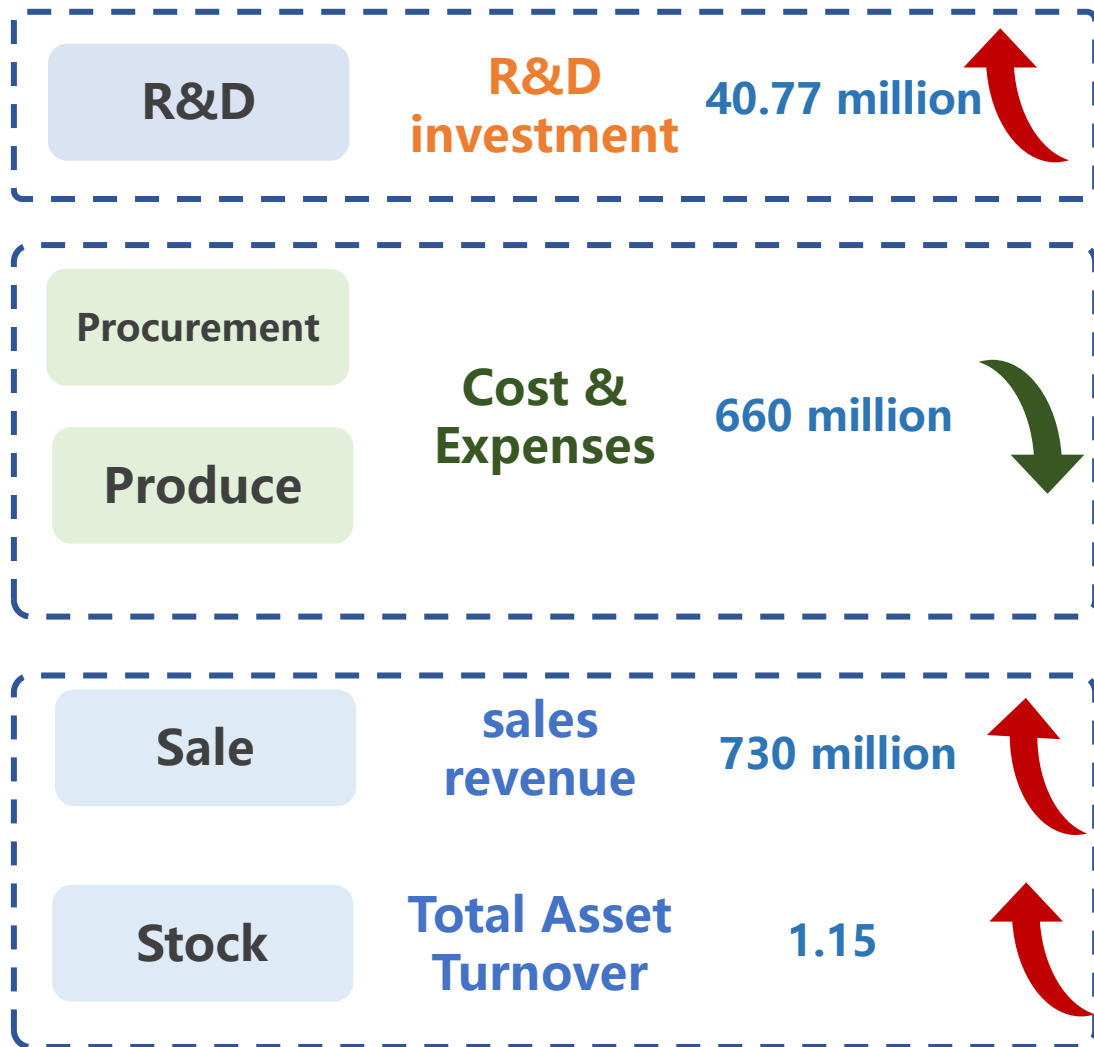
Systematization of supply chain management



## An Implementation Timeline

<i>Implementation Plan</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>
<b>R&amp;D Solution</b>												
<input checked="" type="checkbox"/> Build the IPD process	[Light Blue Bar]											
<input checked="" type="checkbox"/> Slim-waisted ecological	[White Bar]						[Light Purple Bar]					
<input checked="" type="checkbox"/> Economic cost control	[White Bar]		[Light Green Bar]									
<b>Procurement Solution</b>												
<input checked="" type="checkbox"/> Strategy optimization	[Light Blue Bar]					[White Bar]						
<input checked="" type="checkbox"/> Commodity hedging	[Light Purple Bar]											
<input checked="" type="checkbox"/> Supplier big data	[White Bar]						[Light Green Bar]					
<b>Production Solution</b>												
<input checked="" type="checkbox"/> Automated production line	[Light Blue Bar]					[White Bar]						
<input checked="" type="checkbox"/> Self-produced cables	[White Bar]			[Light Purple Bar]						[White Bar]		
<input checked="" type="checkbox"/> Flexible production control	[White Bar]						[Light Green Bar]					
<b>Sales Solution</b>												
<input checked="" type="checkbox"/> Sales process optimization	[Light Blue Bar]					[White Bar]						
<input checked="" type="checkbox"/> Expand the market	[White Bar]				[Light Purple Bar]						[White Bar]	
<input checked="" type="checkbox"/> Reduce Sales Expenses	[Light Green Bar]											

# Implementation effect



differentiated competitive advantage

cost reduction

increase in revenue

Budget targets for 2022





***CleanTech* Co.**

**THANKS**