



CleanTech: cost controll, efficiency increase and sustainable development

XB20222590_Wildest Eagles

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AGENDA

I. Urgent Problems

1. Relatively low revenue
2. High cost
3. Expense reduction

II. Cost Reduction Scheme

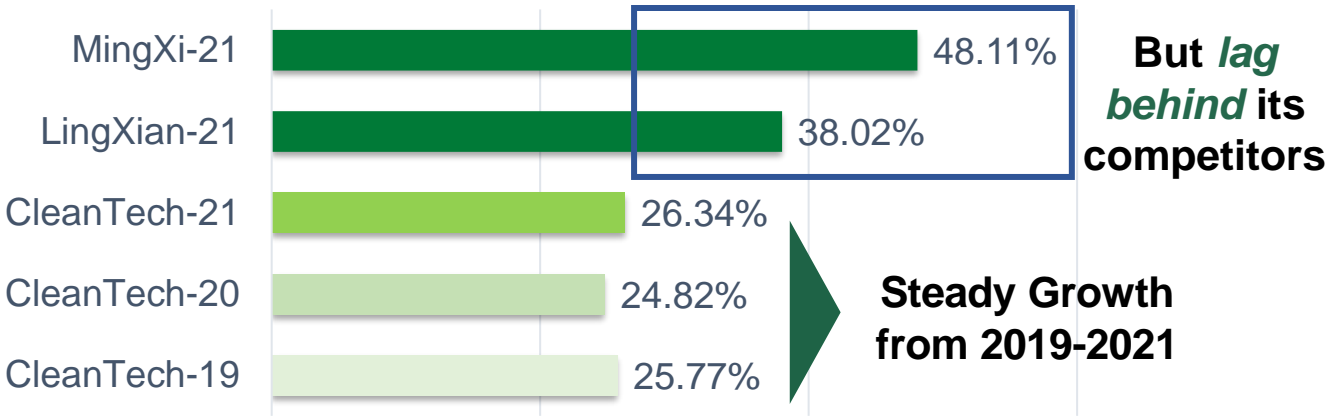
III. Budget Arrangements of R&D



Benefiting from the expansion of whole market scale, CleanTech's Margin Revenue has gradually increased, but revenue and profit still lag behind peers

The company's market expansion effect

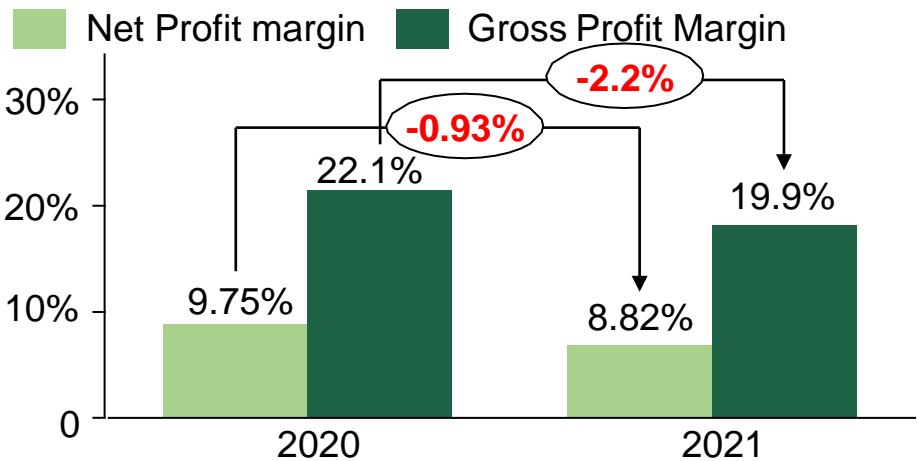
Revenue growth rate of these 3 Co



Growth Rate of PV installations and leading companies
24.4% for global PV installations **35%-45% for top companies**. Core competency of products is needed to increase revenue

How to improve Core Competency of products:
Technology Center is required to develop high-quality, low-cost and marketable products faster than competitors

Company's Performance in Profit



CleanTech's profitability shows a *downward* trend

Indicator	2020	2021	Δ
SR / (Cost + Expenses)	1.2096	1.1751	-2.85%
SR / Cost	1.28	1.25	-2.34%
SR / Expenses	9.79	10.37	+5.92%

It's the *cost that leads to dysfunctional* operation efficiency

Higher cost contributes to negative chain reaction: lower profits, higher book value of accounts payable, increased liabilities, and abnormal turnover

Net profit↑ = Revenue↑ – Cost↓ – Expense↓

Abnormal Indicators	CleanTech			LingXian	MingXi
	2019	2020	2021	2021	2021
Return on equity	18.95%	19.31%	18.25%	18.84%	24.87%
Return on Assets	10.53%	11.99%	9.74%	10.35%	15.26%
Debt ratio	31.65%	42.44%	49.66%	45.41%	39.89%
Equity multiplier	1.8	1.61	1.87	1.82	1.63
Assets Turnover	1.17	1.23	1.11	1.31	1.4
Trade Payable Turnover	2.3	3.37	2.81	2.42	2.23

Excess costs result in profitability lower than average levels

Debt Ratio Formula = $\frac{\text{Total Liabilities}}{\text{Total Assets}}$

Equity Multiplier Formula = $\frac{\text{Total Assets}}{\text{Total Share Holder's Fund}}$

Excess costs result in higher BV of trade payables belongs to Debt

Asset Turnover Ratio Formula = $\frac{\text{Net Sales}}{\text{Average Total Assets}}$

Payable turnover = $\frac{\text{Costs}}{\text{Average payables}}$

Excess costs result in higher debt and cost of sale.

Production Center is required to reduce costs from labor costs, manufacturing expenses, and achieving scale effect

Supply Chain Center is compelled to reduce purchasing cost by maintaining relationship with suppliers, adopting financial schemes to hedge with price fluctuation and extending cash cycle

Though expenses have not made a significant negative impact on profits and sale revenues, it still need to be managed

Net profit↑ = Revenue↑ – Cost↓ – Expense↓

Comparison between CleanTech and Industry leader QC Solar

QC Solar Co.			CleanTech Co.	
	Amount	Proportion	Amount	Proportion
Sales revenue	73,590	1	58,159	1
sales cost	60070	81.63%	46584	80.10%
Tax and surcharges	206.8	0.28%	159	0.27%
Sales expenses	1380	1.88%	1007	1.73%
Administrative expenses	1570	2.13%	1367	2.35%
R&D expenditure	2813	3.82%	2910	5.00%
Financial expenses	197.6	0.27%	168	0.29%
Non-operating expenses	75.41	0.10%	20	0.03%
Net profit	64,850	8.81%	5217	8.97%



- Both QC Solar and CleanTech engaged in R&D, production and selling of **PV junction box and connector**
- A-share listed company** recently
- Strong momentum of development**

Less than QC but more fund should be raised for sale expense

More than QC for **HR & Administrative Center** to be improved

More than QC but CleanTech deserves high R&D expenditure for its further development

Technology Center needs to improve its product success rate

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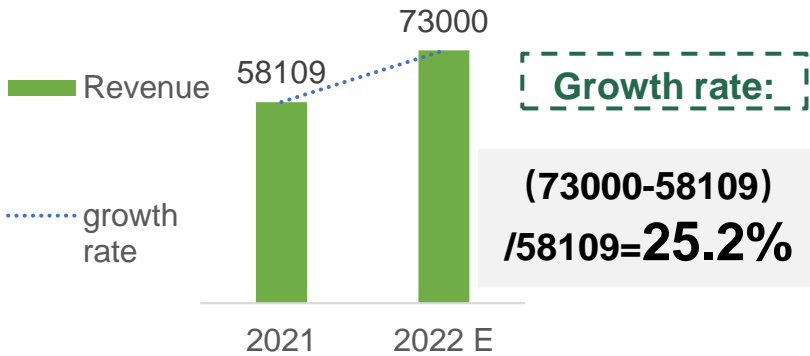
1. Production Center
2. Supply Chain Center
3. HR & Administrative Center
4. Market Center

III. Budget Arrangements of R&D



Production Center: The expected output and cost.

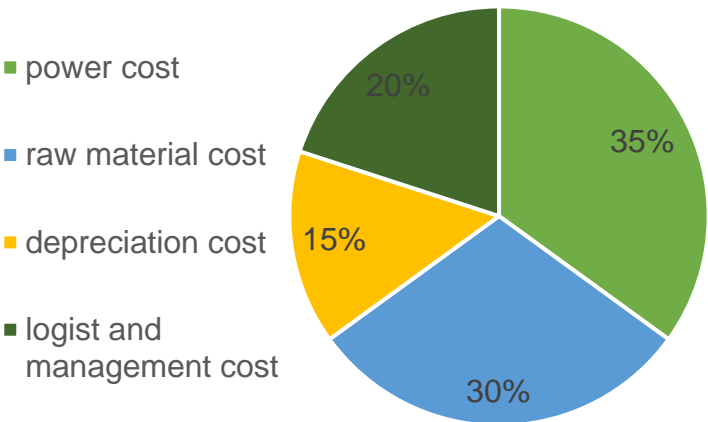
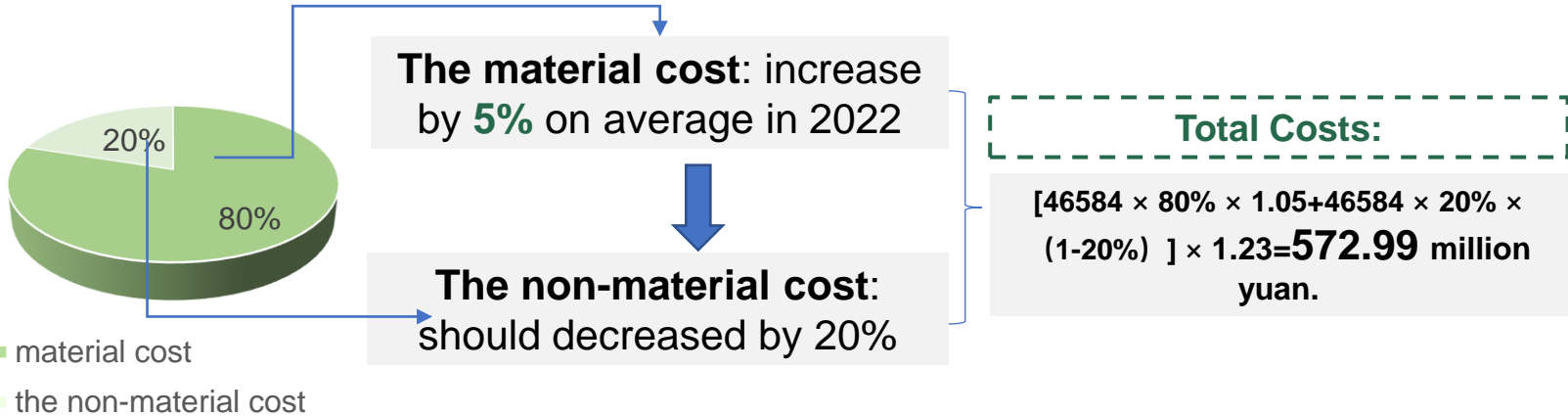
Output



Sales volume/
output

$$\begin{aligned} & \text{Growth rate} = 25.2\% + 1 \\ & \text{increase in sales price of 2022} = 2\% + 1 \\ & = 1.23 \end{aligned}$$

Cost



$$\text{power cost} = 57299 \times 0.35 = 20054.65$$

$$\text{raw material cost} = 57299 \times 0.3 = 17189.7$$

$$\text{depreciation cost accounts} = 57299 \times 0.15 = 8594.85$$

$$\text{the logistics cost, management cost and labor cost} = 57299 \times 0.2 = 11459.8$$

Production Center: control cost and increase efficiency

Reduce the purchase cost by optimizing the purchase mode

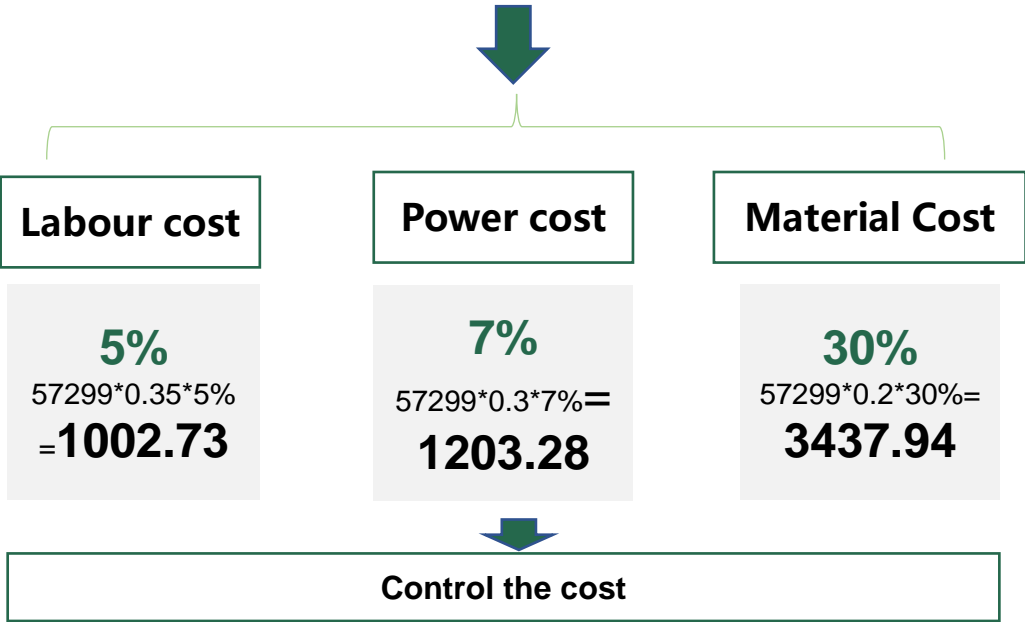
Reason: As the price of imported raw materials continues to rise under the influence of various factors and is greatly affected by the market, the company is difficult to reduce its costs from the aspect of raw materials. Therefore the company can reduce the purchase cost by optimizing the purchase mode:

Tactics	objectives
Through the use of electronic bidding and electronic procurement platforms, better purchase prices can be obtained and procurement and labour costs can be reduced;	Reduce labor cost by 3% and raw material cost by 1% ($57299 \times 0.2 \times 3\% = 343.79$, $57299 \times 0.3 \times 1\% = 171.90$)
Establishing long-term cooperation with suppliers to obtain better purchase prices.	Reduce raw material cost by 2% , ($57299 \times 0.3 \times 2\% = 343.79$)
By centralizing the purchase demands of different departments and projects, we can obtain a larger purchase volume, thus obtaining a better purchase price and reducing administrative costs.	Reduce raw material cost by 2% and administrative cost by 4% ($57299 \times 0.3 \times 2\% = 343.79$, $57299 \times 0.2 \times 4\% = 458.39$)
By optimizing supply chain management, logistics efficiency can be improved and transportation costs can be reduced.	Reduce logistics costs by 4% ($57299 \times 0.2 \times 4\% = 458.39$)

Realize the highly mechanized production process

Reason: there are too many low-end labor in the production process, on the one hand, the labor cost is high, on the other hand, the proportion of the realizable cost is large, and the scale effect is not obvious.

Purchase new automation equipment to realize the highly mechanized production process.



Financial departments : control cost and increase efficiency

Total cost :27.05 million,
a monthly average :2,254,100

Strengthen fund budget management. The budget is made from the target, which makes the budget of each department more accurate and reduces the cost caused by unclear. It is estimated that the cost will decrease by **1 million yuan** according to the revenue of 2021 when the output increases.

Objective

- Strengthen the accuracy of tax administration, reduce taxes and fees by using national preferential policies.
- Strengthen asset allocation and optimize debt structure.
- Summarized production management, and proposed cost control proposals.
- Through ERP, strengthen module training, and improve work efficiency by guiding, feeding back and tracking card points
- Standard costing and difference analysis with actual cost.

Measurable indicators and steps to achieve the goals

indicators	
100% accuracy rate of tax management	production capacity by the 5 th ; financial statement by the 18 th ; fixed asset items by the 7 th ; annual statistics by March 15 th . <ul style="list-style-type: none">Complete the declaration of VAT, additional tax, personal income tax, stamp duty, property tax and social security by the 15th of each month;Complete the declaration of land use tax by December each year.The previous year's R & D expenses plus deductions project declaration, the remittance report, audit report before April.The annual audit of business and enterprise income tax remittance before May.
decrease in accounts receivable of 10 million increase in cash of 10 million	Sell inventory and collect accounts receivable.
Management accounting to reduce non-material costs by 15%	Collect monthly summary reports of each position, extract data related to analysis and report to leaders in a timely manner
ERP system implementation resulted in an inventory accuracy rate of 90%	Planning the internal stocking system of the warehouse, quantifying the work of the warehousemen, marking the standardization of the stock card area, carpet self-inventory, re-inventory and regular sampling.
Standard costing and comparative analysis with actual costs	Restructuring the staffing structure of the company, reducing the number of inefficient staff and increasing production staffing

HR & Administrative Department : control cost and increase efficiency

Net profit ↑ = **Revenue** ↑ – **Cost** ↓ – **Expense** ↓

Tactics	Objective
<div>Verify and adjust various expenses.</div> <div>strengthen the management of personnel entertainment expenses, office expenses, travel expenses, registration fees and other expenses, and reduce administrative expenses</div>	<div>Reduced administration cost:70 million</div>
<div>Strengthen the performance management of all departments, improve the timeliness of performance assessment and increase efficiency</div> <div>Use data to speak, objectivity to judge the problem, eliminate the lack of data indicators, and execute the assessment with the principle of fairness and impartiality.Assessment data remittance, interview, feedback and submission by the 15th of each month<ul style="list-style-type: none">• completion of data collection for each department on the 7th of each month.• completion of data analysis on the 10th of each month.• completion of feedback and interview on the 13th of each month.• complete the report submission on the 15th of each month;</div>	<div>Timeliness of performance appraisal 100%</div>
<div>Analyze and adjust the organizational structure, rationally allocate management personnel,</div> <div>It can avoid unclear rights and responsibilities and redundant personnel</div>	<div>Reduced administration cost:30 million</div>

Purchasing Department : There are 3 Problems.

Purchasing Department problem analysis

Net profit ↑ = **Revenue** ↑ – **Cost** ↓ – **Expense** ↓

	CleanTech		
	2020	2021	Average
Current Liabilities	11821	30238	21030
notes payable and accounts payable	12281	22695	17488



Trade payable grows too fast from **12281** in 2020 to **22695** in 2021.

Problem1: which may indicate that purchasing cost is too high, then decreasing profit and ROE.


	CleanTech			Leading PV	Mingxi PV
	2019	2020	2021	2021	2021
Return on equity	18.79%	19.28%	18.25%	18.84%	24.87%
Gross Profit Margin	24.30%	22.10%	19.90%	18.70%	23.00%
Net Profit Margin on Sales	8.92%	9.75%	8.82%	7.90%	10.90%

Problem 2 and 3:

- **Our company' s period costs are a little higher than other companies.** Clear Tech has a general gross profit margin, but has a much lower ROE and Net profit margin on sales.
- **The operating costs are increasing year by year, and our company' s purchasing cost control is not very good.** Moreover, our company' s has a trendy to decrease these years,from 24.3%, 22.1% to 19.9%,

Purchasing Department: control cost and increase efficiency

Reduce purchasing costs

3.8% annually cost reduction

Expanding the scope of supplier price comparison:

Enhancing bargaining power with suppliers, Establish long-term cooperative relationship with suppliers

Sign strategic cooperation agreements


Adopt electronic bidding and electronic procurement platform

Futures investment

Centralized purchasing

Master the market trend

Increase usage efficiency

Objective: Material quality qualification rate **98.7%**

Tactics

Improve the qualified rate of incoming materials by familiarizing with products, implementing effective supplier management and so on . For example, PV junction box and connector are the “control center” , which should be attached more importance to guarantee its quality and products’ safety.

Other objectives and tactics

Objective

Completion rate of complete set of materials

Sample achievement rate

Delivery rate

99%

98%

99%

Tactics

With formulation of reasonable production plan and reasonable arrangement of material control plan, the material can be returned with quality and quantity guaranteed.

Warehousing Department: control cost and increase efficiency

Strategy: Optimizing inventory management



Optimizing inventory management can avoid excessive inventory costs and excessive inventory occupancy costs.

JIT: a technique to minimize inventory levels

JIT is a series of manufacturing and supply chain techniques that aim to minimize inventory levels and improve customer service by manufacturing not only at the **exact time** customers require, but also in the **exact quantities** they need. Inventory is reduced to an absolute minimum or eliminated altogether.

- Improve materials flow through the production process.
- Improve relationship with suppliers.
- More motivated employees.
- Improve operational efficiency.
- Reducing manufacturing lead time
- High product quality
- Better product customization.

Objectives and tactics

Objective	Tactics
Three-day material preparation rate 100%	Each warehouse keeper shall make clear the tasks of material preparation and prepare materials for each order every day.
Consistency rate between inventory and account ≥ 99%	Firstly, Master the warehousing business skills through the training of the warehouse keeper's business skills.
	Secondly: Detailed control of material receipt, delivery and inventory.
	Thirdly: Make daily and monthly inventory.
Visual management of materials	Firstly: Mark all areas of the warehouse.
	Secondly: Through visual management of the warehouse, all personnel can quickly find the required materials.
Reasonable planning of warehouse space layout to improve the utilization rate of warehouse space.	Reasonable adjustment of warehouse space layout.

Market Center: Increase efficiency

Strengthen market penetration and expand overseas markets, especially Vietnam markets.

With increase sales volume in the face of weak pricing power, and the first echelon of domestic industry mainly in domestic sales to form a stable customer base.

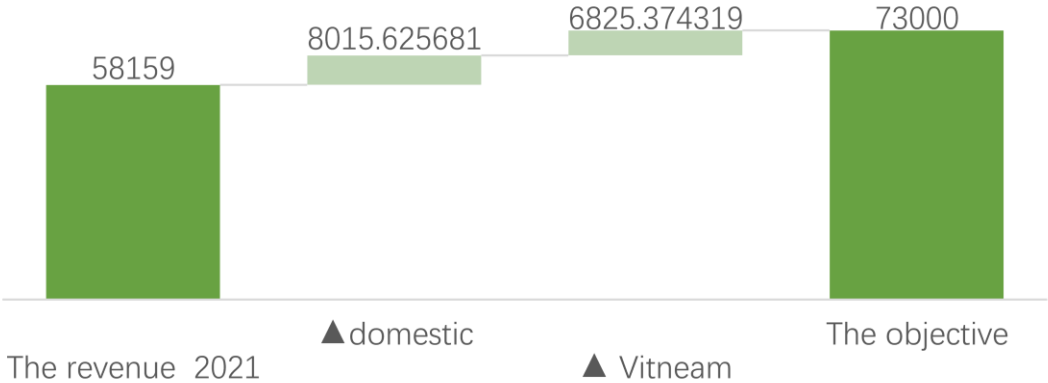
We need to **expand the Vietnamese market** demand for junction boxes, and it has not formed a monopoly situation, there is **still room to enter**.



Divide 73000 of revenue into domestic revenue and the revenue from

Estimated Revenue increase rate: 25.2%
Domestic revenue increase rate: 16.17%

▲ **domestic revenue**
= 16.17% * Revenue of 2021 = **8015.62**
▲ **revenue from Vietnam**
= (25.2% - 16.17%) * Revenue of 2021 = **6825.37**



Improve the business capacity and optimize the sales staffing

It is necessary to improve the business capabilities of the sales staff in the marketing department in order to meet the per capita business volume assigned to individuals. At the same time, we optimize the allocation of sales staff in each market at home and abroad.

Number of business capacity training

incentive program for target per capita business volume

Number of personnel movements

New salesman

New and existing customer development

the top 10 old customers counter-order ratio

the number of old customers referring new customers

the conversion rate of new customers as required

- Observe the old customer dynamic
 - Contact with the old customer every week
 - Serve the old customer return single growth
 - Improve the recommendation incentives
-
- Domestic market penetration, increase the number of new user conversion orders
 - Improve overseas (Vietnam market) new customer conversion orders

Market Center: control cost

Cost budget

Control cost based on the budget.

Net profit ↑ = **Revenue** ↑ – **Cost** ↓ – **Expense** ↓

Control cost and reduce it

Objectives and tactics

To achieve net profit(7000)and the revenue(73000).

Based on fixed tax and fee expenses

Total cost :1133.2 million,
a monthly average :94,million

We need to reduce the expense by 10% on the original basis

Objective 1: 15% reduction in business hospitality expenses

Objective2: 15% reduction in average travel costs

- **Real-time control of office expenses such as water, electricity, printing, etc.**

In order to reduce costs and increase efficiency, the marketing department must "cut costs". The marketing department keeps track of the daily sales expenses every month and controls the expense exceptions. Avoid excessive hospitality, optimize travel arrangements and accomplish sales cost savings targets.

- Improve the standards of the hospitality process .
- Strictly approve the budget of hospitality expenses

- Improve travel standards
- Optimize travel arrangements through travel time and location

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I. Urgent Problems

II. Cost Reduction Scheme

III. Budget Arrangements of R&D

1. Characteristics and management priorities on technology and product development
2. Investment should be raised
3. Conduct R&D in IPD procedure



Characteristics & Management priorities of technology development (TD) & product development (PD)

Technology Development (TD)

- **Research (R of 'R&D')**
- **Basic principles and technology paths**
- **Main purpose: ensure that the technology is advanced and completed delivery**
- **Including basic research, application development, project development**

Characteristics
of Technology
Development

Management
Priorities of
Technology
Development

- **Planning:** especially pre-research, each stage of development plan are made on each stage
- **Project Manager:** usually developers
- **Performance:** rigorous, failure is allowed
- **Clients:** product managers who apply the results

Product Development (PD)

- **Development (D of 'R&D')**
- **Industrialization of technological achievements and marketing financial success**
- **Meet the differentiated needs accurately, quickly, at low cost with high quality**
- **Including product development, solutions, services and operations**

Characteristics
of Product
Development

Management
Priorities of
Product
Development

- **Planning:** Plans are usually immutable
- **Project Manager:** usually the product manager, possibly the marketing manager
- **Performance:** strict and responsible for the results
- **Clients:** external real customers

❑ How to reduce cost and increase efficiency of Technical Center? → ❑ Build up light IPD procedure

Approval of the R&D budget (5 million yuan) on DCPs during IPD of intelligent junction box will result in an increase in sales revenue of 400 million yuan

Decision on whether to approve budget

ROI on intelligent junction box R&D

=
invest in intelligent junction box
expacted revenue generated

= 5/400* (million) = 1/80 < 4.9%



0.1 Billion yuan	2022	2023E	2024E	2025E
Global junction box revenue	98	100	106	113
CleanTech	7.84	8	8.48	9.04
Intelligent Junction Box	Increase nearly 400 million			

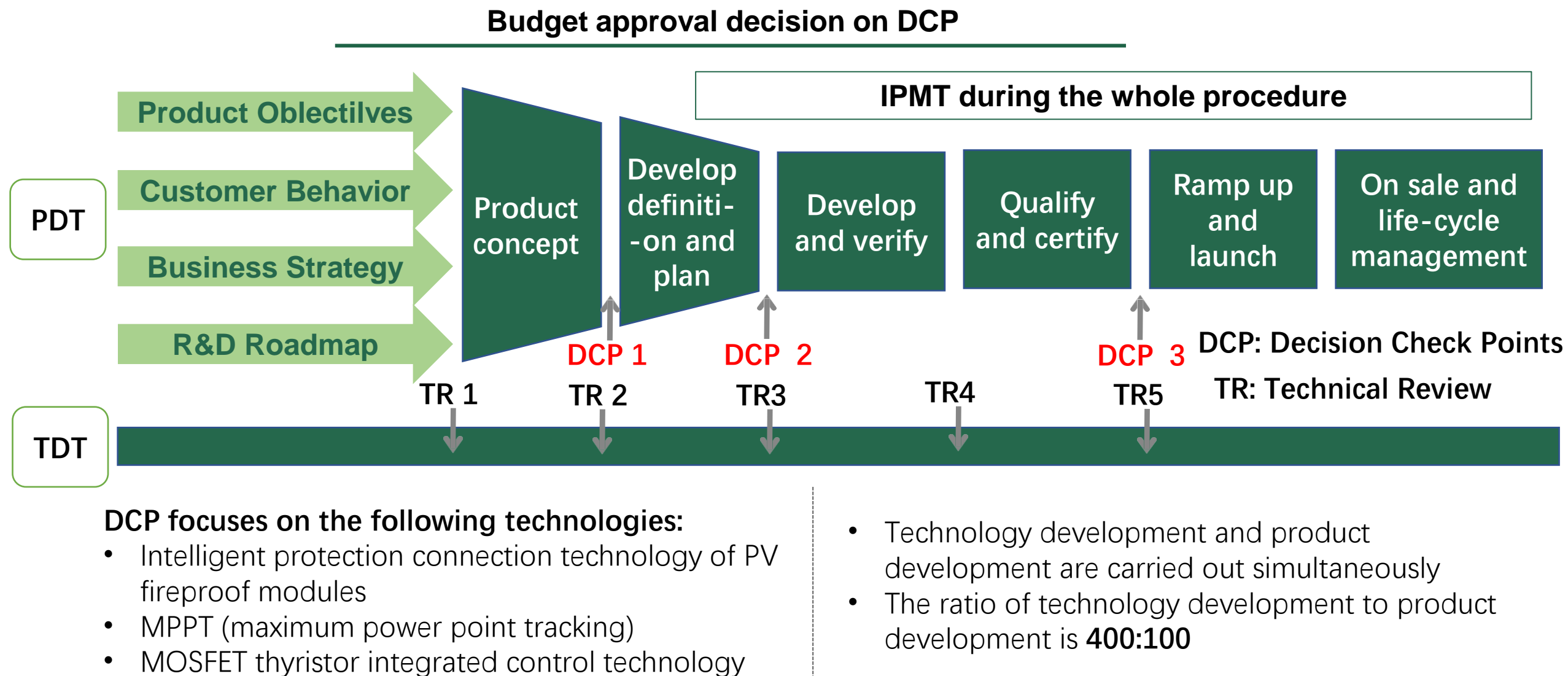
CleanTech should Invest in this R&D which is financially feasible and marketable

*400 million: based on the news released by Tongling Electric (industry leader)



Invest in R&D which products have concrete target market to achieve sustainable development

Approval of the R&D budget (5 million yuan) on DCPs during IPD of intelligent junction box will result in an increase in sales revenue of 400 million yuan





Thanks !

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