March on the sea with endless waves

——Strategic transition of CleanTech Co.

TEAM:Floraison —— **Number: HB20221966**

1 External & Internal Analysis

- External Analysis-PEST
- Internal Analysis-DuPont Model

1.1 External Analysis-PEST >> Policy-oriented, huge exports, green awareness and technology iteration

Politics: The era of PV parity is coming

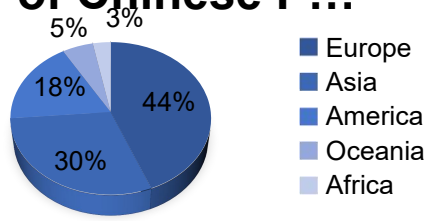
- Carbon peak and carbon neutrality gained global attention
- Strong policy-oriented. e.g. 531 policy in 2018 lead to PV parity

→

- Grasp **preferential policies**
- Cope with **cost pressure**

Economy: Product exports hit a record high

The export market of Chinese P…



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- exploit **overseas PV market**

- PV products exports topped the record with a 43.9% increase (PV modules: 25.1%)

Society: Growing environmental awareness

- Sustainable development and dual-carbon goals
- Public awareness of environmental protection has been raised.

→

- PV power conform with green development and holds **enormous promise**

Technology: Continuous technical iteration

- Upstream: Monocrystalline replac polycrystalline

- Midstream: N-type PV cells are expected to be mainstream applications

→

- Enterprises may gain the more from **integration**

Sources: WWW.ASKCI.COM

1.2.2 DuPont Model >> Eclipsed ROE caused by low turnover

2019	2020	2021
18.79%	19.28%	↓ 18.25%

ROE of CleanTech Co.

We can find:

All > 15%

➡ still has a good **growth tendency**

	ROE
LingXian Co.	18.84%
MingXi Co.	24.87%

ROE of comparable companies(2021)

➡ **stable**, but **lower** than the industry average among comparable companies in 2021

	Net profit margin on sales	Total asset turnover	Equity multiplier
CleanTech Co.	**8.82%**	**1.11**	**1.87**
LingXian Co.	7.90%	1.31	1.82
MingXi Co.	10.90%	1.40	1.63

Three factors of three companies(2021)

We can find:

In 2021, CleanTech Co. has medium profit margin, low turnover and high leverage

➡ CleanTech Co.'s ROE is driven by **profit margin** and **leverage**

1.2.3 DuPont Model >> Increase in cost & expenses leads to lower net profit margin

	2020	2021
Net profit margin on sales	9.75%	8.82%

Net profit margin on sales of CleanTech Co.

	LingXian	MingXi
Net profit margin on sales	7.90%	10.90%

Net profit margin on sales of comparable companies(2021)

Most variable & Expected ROE motivation

Our **starting point** for strategy

Cause analysis

The growth of cost outweighs that of sales

1

- increase in price of raw material
- diminishing subsidy
- rise in ocean freight
- increment in temporary employment salary expenses

2

R&D Expense ratio

4.77%→5.00%

2020 2021

more input to R&D for product safety

1.2.4 DuPont Model >> Rise in accounts receivable & inventory pulls assets turnover down

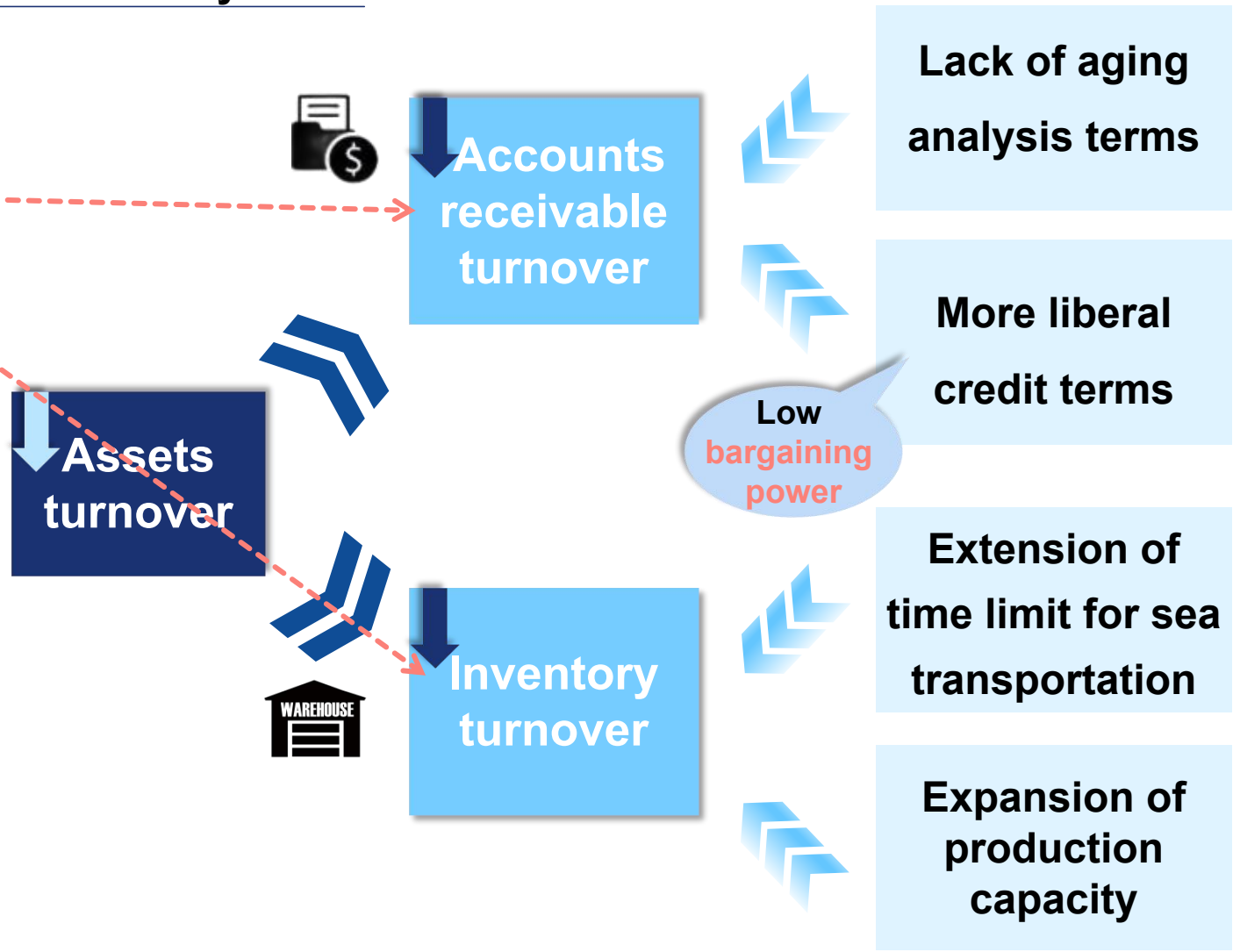
	2020	2021
Assets turnover	1.23	1.11
Accounts receivable turnover	2.33	1.94
Inventory turnover	5.68	5.30

Assets turnover, accounts receivable turnover and inventory turnover of CleanTech Co.

	LingXian	MingXi
Assets turnover	1.31	1.40
Accounts receivable turnover	2.42	3.12
Inventory turnover	4.91	5.78

Assets turnover, accounts receivable turnover and inventory turnover of comparable companies(2021)

Cause analysis



1.2.5 DuPont Model >> Equity multiplier, a double-edged sword

Interest-free or low interest

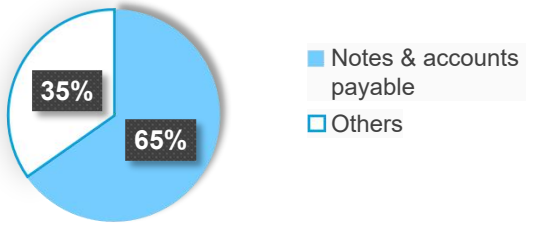
60.66%

	2020	2021
Equity multiplier	1.61	↑1.87
Total liabilities	18,821	30,238
Notes & accounts payable	12,281	22,695
Accounts payable turnover	3.37	↓2.66

84.80%

Equity multiplier, total liabilities,accounts payable and accounts payable turnover of CleanTech Co.

Liabilities

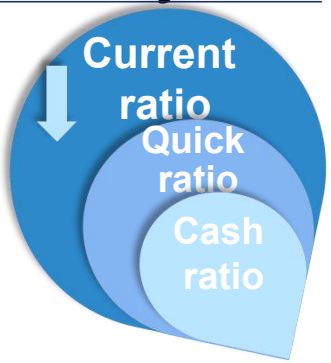


Double effect

High equity multiplier

- **Increasing capital occupation capacity** → **Positive financial leverage effect**
- **Difficulty in capital turnover** → **Greater liability risks & possibility of defaults**

Cause analysis



- **Liquidity** ↓
- **Solvency** ↓
- **Asset-liability ratio** ↑ 42.44%→49.66%

1. Too much purchase on credit
2. Worse liquidity of receivables

2 Strategy&Implementation

- Current Budget
- Strategy-Corporate level
- Strategy-Center level
- Strategy-Technology Center

2.1 Current Budget >> We need to reduce cost and increase efficiency

	2021	2022E
Operating Revenue (0000's)	58159	71601.41
Unit Price	18.58	18.95 +2%
Sales Volume (0000's)	3130.19	3778.12 +20.70%
Operating Cost (0000's)	46584	58475.58
Unit Cost	14.88	15.48 +4%
Gross Profit (0000's)	11575	13125.82
Gross Profit Margin	19.90%	18.33%

✗ Fail to reach 73000 → Reduce cost and increase efficiency

Market size growth(constant market share)

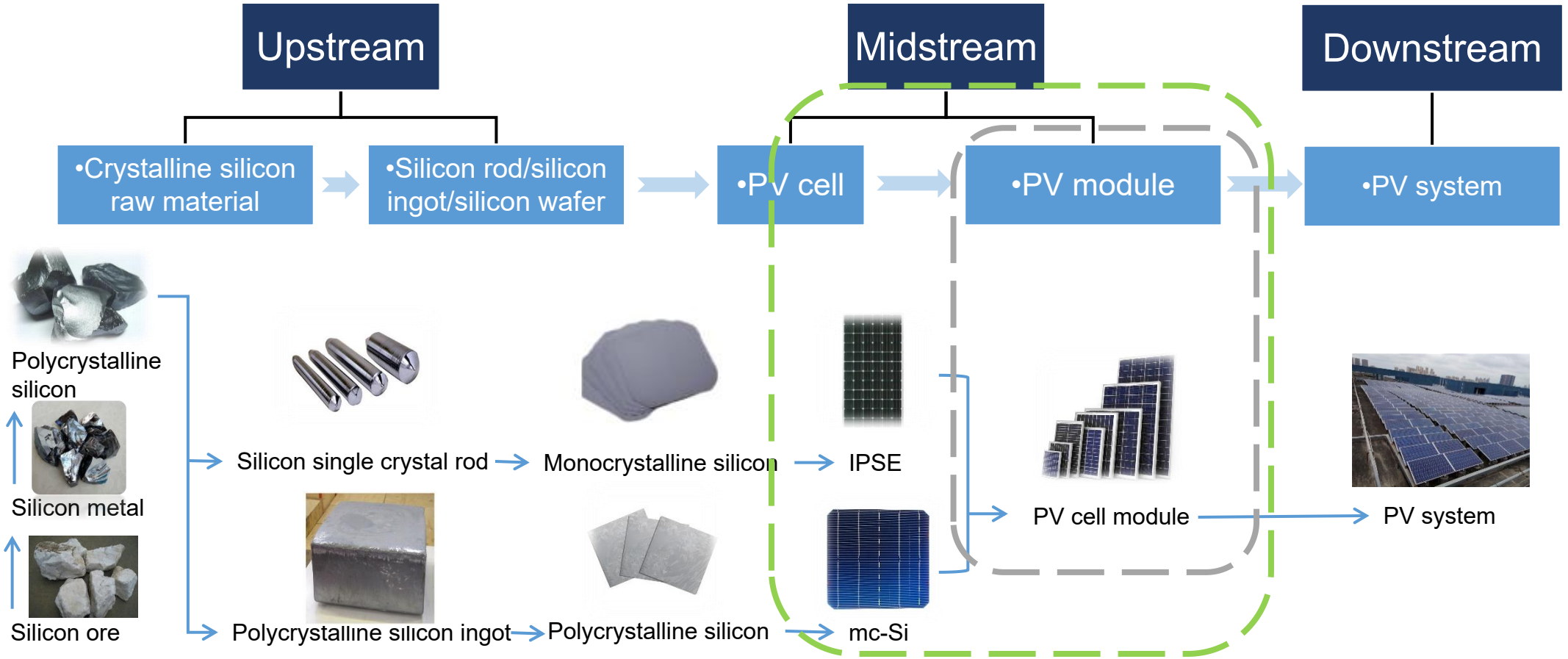
	2021	2022E	YOY
Market size	40800	49245.28	**20.70%**

Quick Electronic(similar scale)

	Unit Price	Gross Profit Margin
80% ← **Junction box**	**18.58**	18.62%
Connector	2.6	15.85%

Sources: Quick Electronic 2021 annual report; Anxin Securities Research Institute

2.2 Strategy-Corporate level >> Extend industrial chain to PV cell



PV module

+

PV cell

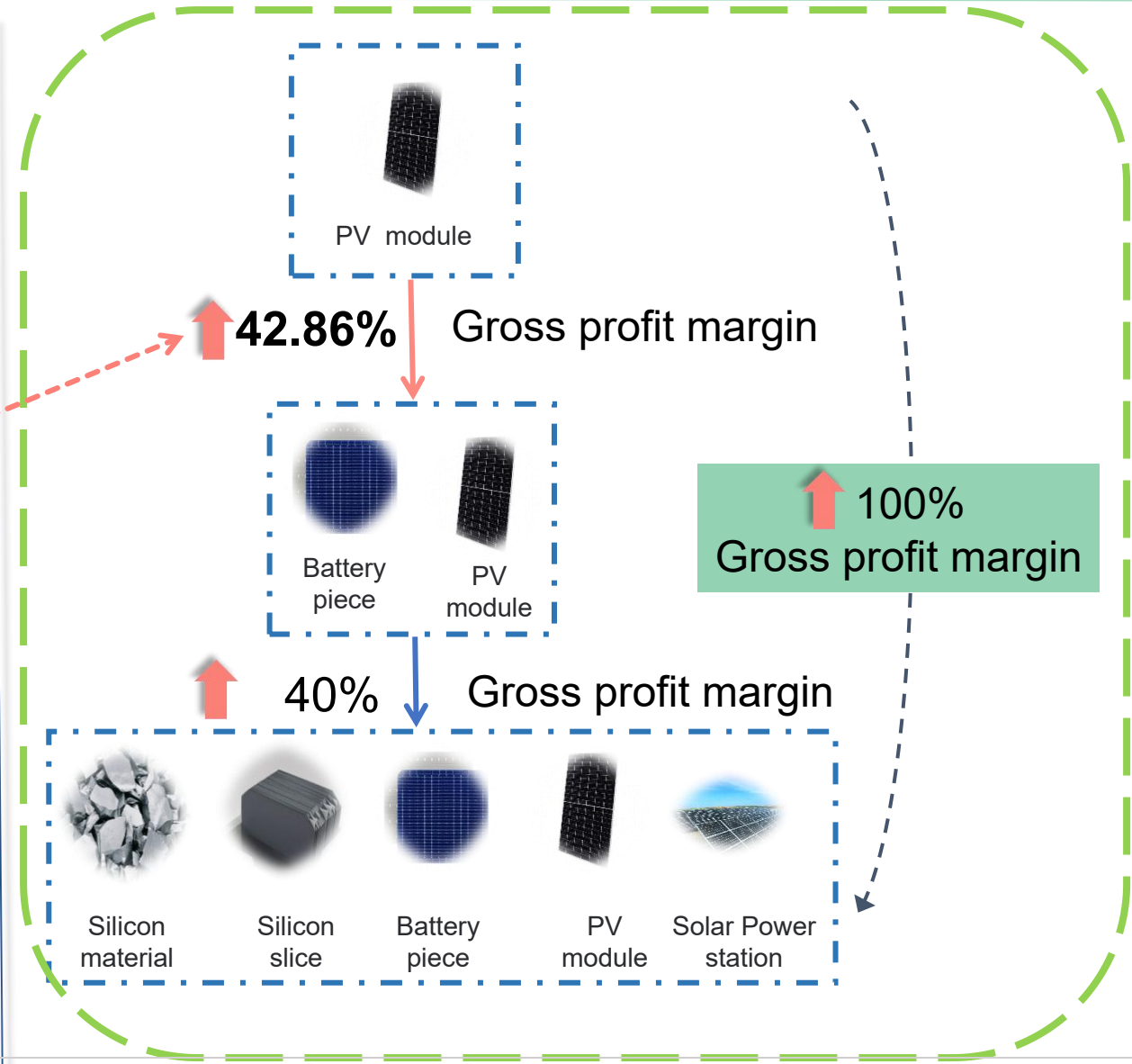
Why PV cell?

- The price upstream fluctuate greatly, and the cost pressure is finally transmitted to PV modules. Self-produce PV cell helps **retain profits, control costs** while **ensure the supply of raw materials and delivery capacity**.
- PV cell accounts for the **main cost** of PV module; **N - type PV cell** has a good technical efficiency.

2.2 Strategy-Corporate level >> Vertical integration improves profitability significantly

	2022E	2022E(Vertical integration)
Operating Revenue (0000's)	71601.41	71601.41
Unit Price	18.95	18.95
Sales Volume (0000's)	3778.12	3778.12
Gross Profit (0000's)	13125.82	18751.55
Operating Cost (0000's)	58475.58	52849.86
Gross Profit Margin	18.33%	26.19%
Unit Cost	15.48	13.99

+42.86%



Sources: Hetai (Beijing) Asset Management Co., Ltd

2.2 Strategy-Corporate level >> Strengthen coordination between centers

Coordinate delivery cycle and goods tracking

Forecast sales to purchase

Layout of sales channels

Follow up the payment status of accounts receivable and advances received

Apply

Quality Assurance

Technology Center

Production Center

Quality Center

Market Center

Supply Chain Center

Personnel & Administration Center

Financial Center

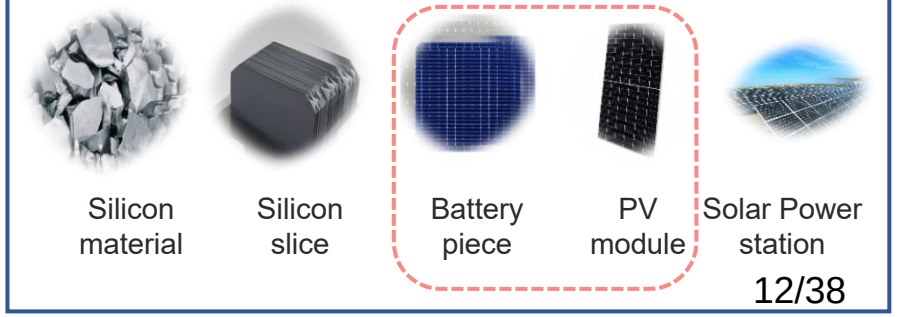
- Product Design Department
- Electronic Design Department
- ★ Production technology Department
- ★ Junction box Factory
- Connector Factory
- Electronics Factory
- Quality Inspection Department
- Equipment Department
- Planning Department
- ★ Sales Department
- ★ Purchasing Department
- Warehousing Department
- ★ Transportation Department
- Personnel Department
- Administration Department
- R&D personnel; Tutorial system; College-enterprise Joint Cultivation
- ★ Financial Department
- ★ Management Accounting Department

Propaganda for authoritative content
Eg. The title of national high-tech Enterprise

Try to meet new market demands

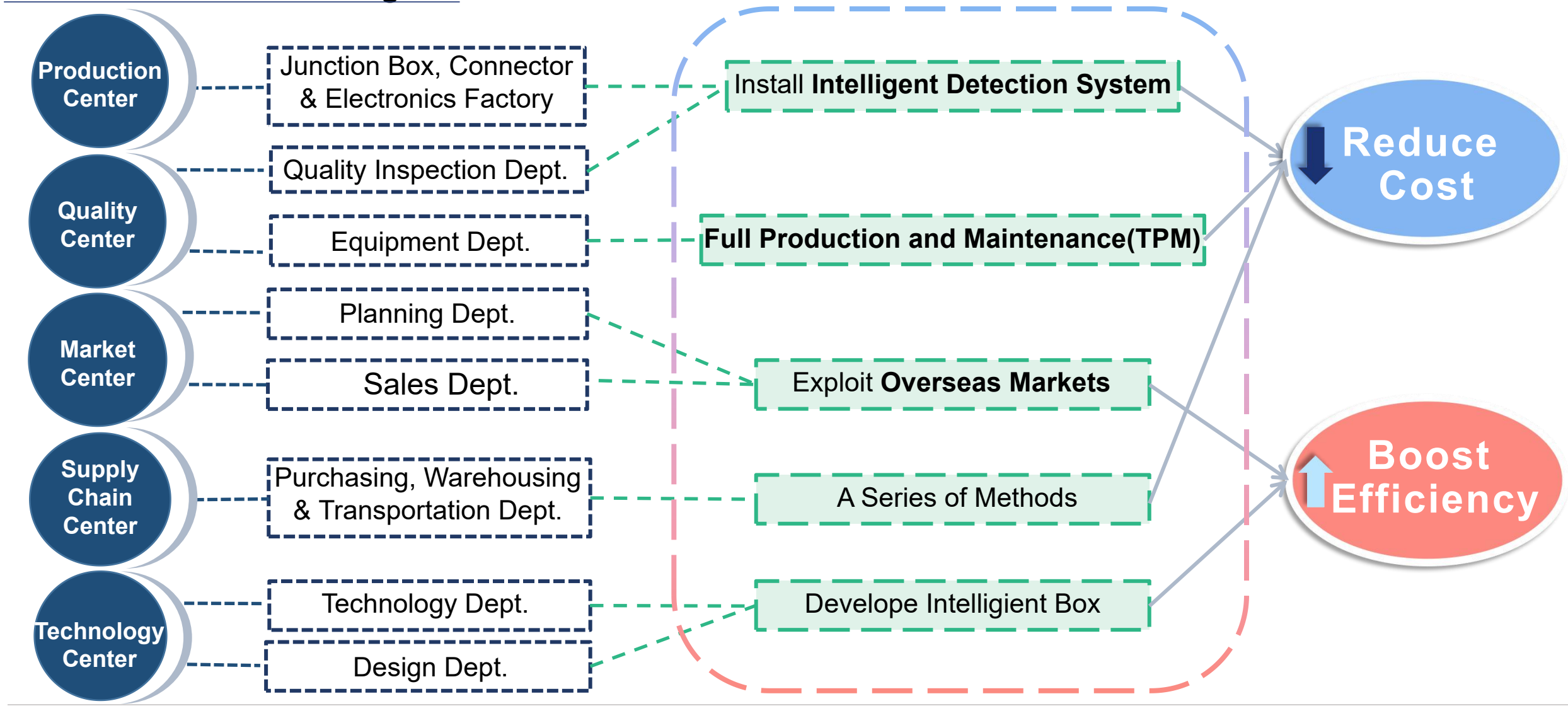
Support Storage

Guide Production



2.3.1 Strategy-Center level >> Collaborate to reduce cost and boost efficiency

Collaborate for the same goal



Sources: Anxin Securities Research Institute

2.3.2 Production&Quality Center >> IDS and TPM Improve quality and reduce loss greatly

	2022E	2022E (IDS and TPM)
Operating Cost (0000's)	58475.58	57625.69
80% Direct Material(0000's)	46780.47	46307.94
10% Direct Labour(0000's)	5847.56	5555.18 -5%
Sales Volume (0000's)	3778.12	3853.68 +2%
Unit Cost	15.48	14.95
Gross Profit (0000's)	13125.82	15407.75 ↑2281.93
Cost of intelligent detection system (0000's)		500 capitalized

×98%÷99%

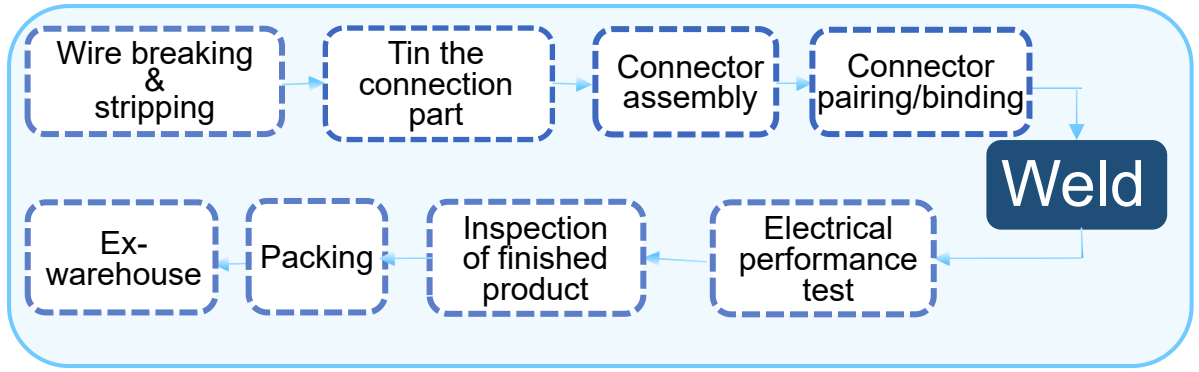
TPM

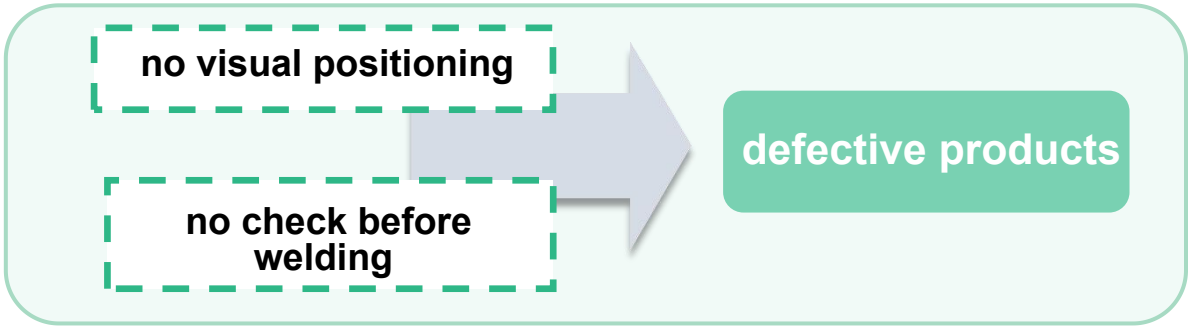
BEFORE

GB/T 37410-2019 → defect rate=2%

AFTER

Intelligent detection system → defect rate<1%





Sources: National public service platform for standards information; Daping Li.Research on TPM Management Application of Company A[D]

2.3.2 Market Center >> Exploit overseas markets to improve quality and reduce loss greatly

Advantages of overseas markets

Demand

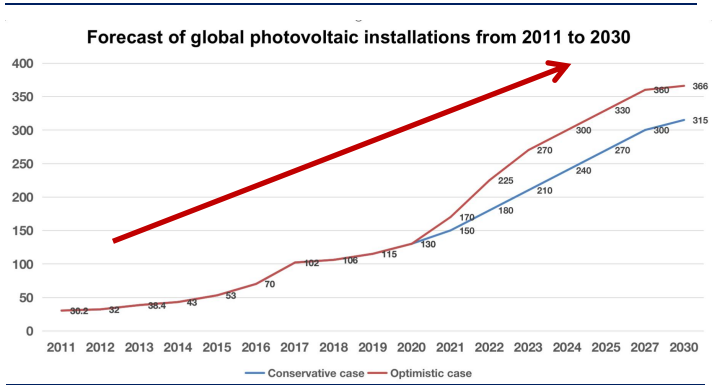
Strong demand & Increasing global markets → The global PV junction box market is expected to reach 11.3 billion yuan in 2025

Policy

Lots of governments have set more active energy transformation targets. →
- REPowerEU Plan
- Renewable Energy Act (EEG)
- ...

Edges

Rising manufacturing costs → Re-highlighted the scale and low cost advantages of China's photovoltaic industry



Comparison between junction boxes and connectors

COMPARISON

high ← Gross profit margin & Domestic substitution rate → low

Mainly export junction boxes

2.3.2 Market Center >> Open up overseas markets does make profit!

COMAPNY	Overseas gross margin (2021)	Overseas sales (2021)	P_{2021}	Overseas sales volume (2021)
Quick Electronic	26.16%	164575000	18.58	8857642.63
TONGLING	22.94%	178846811.27	18.58	9625770.25

$\frac{26.16\% + 22.94\%}{2}$ $\frac{8857642.63 + 9625770.25}{2}$

COMAPNY	Overseas gross margin (2022E)	Overseas sales (2022E)	P_{2022}	Overseas sales volume (2022E)
CleanTech Co.	24.55%	175130337	18.95	9241706.44

Benefits of exploring overseas markets

	2022E (Original)	2022E(New)
Unit Price	18.95	**18.95**
Sales Volume (0000's)	3778.12	**4702.29**
Operating Revenue (0000's)	71601.14	**89114.44**
Operating Cost (0000's)	58475.58	**71689.17**
Gross Profit (0000's)	13125.82	**17425.27** ↑
Gross Profit Margin	18.33%	**19.55%** ↑
Operating Expense Rate	1.73%	**1.88%** ↑
Administrative Expense Rate	2.35%	**2.55%** ↑
Taxes and Surcharges Rate	0.27%	**0.31%** ↑

Higher gross profit and gross profit margin

Opening up overseas markets can drive cost reduction and efficiency increase.

Possible reasons:

- Tax incentives for PV modules
- Prices for raw materials and labor are lower in some overseas areas.
- ...

Sources: QC Solar (SuZhou) Co., Ltd's prospectu published in 2022;The 2021 Annual report of TONGLING

2.3.3 Supply Chain Center >> Use information technology to improve supply chain resilience

Purchasing Dept.

Use long term contracts to ensure supplies → Secure supplies; Forecast demand to identify potential risks

AI: Achieve automated trading by AI → Help automate the trading process

Warehouse Dept.

Use ERP system for inventory management

SAFE: **Safe stock :** cope with the mismatch of supply and demand

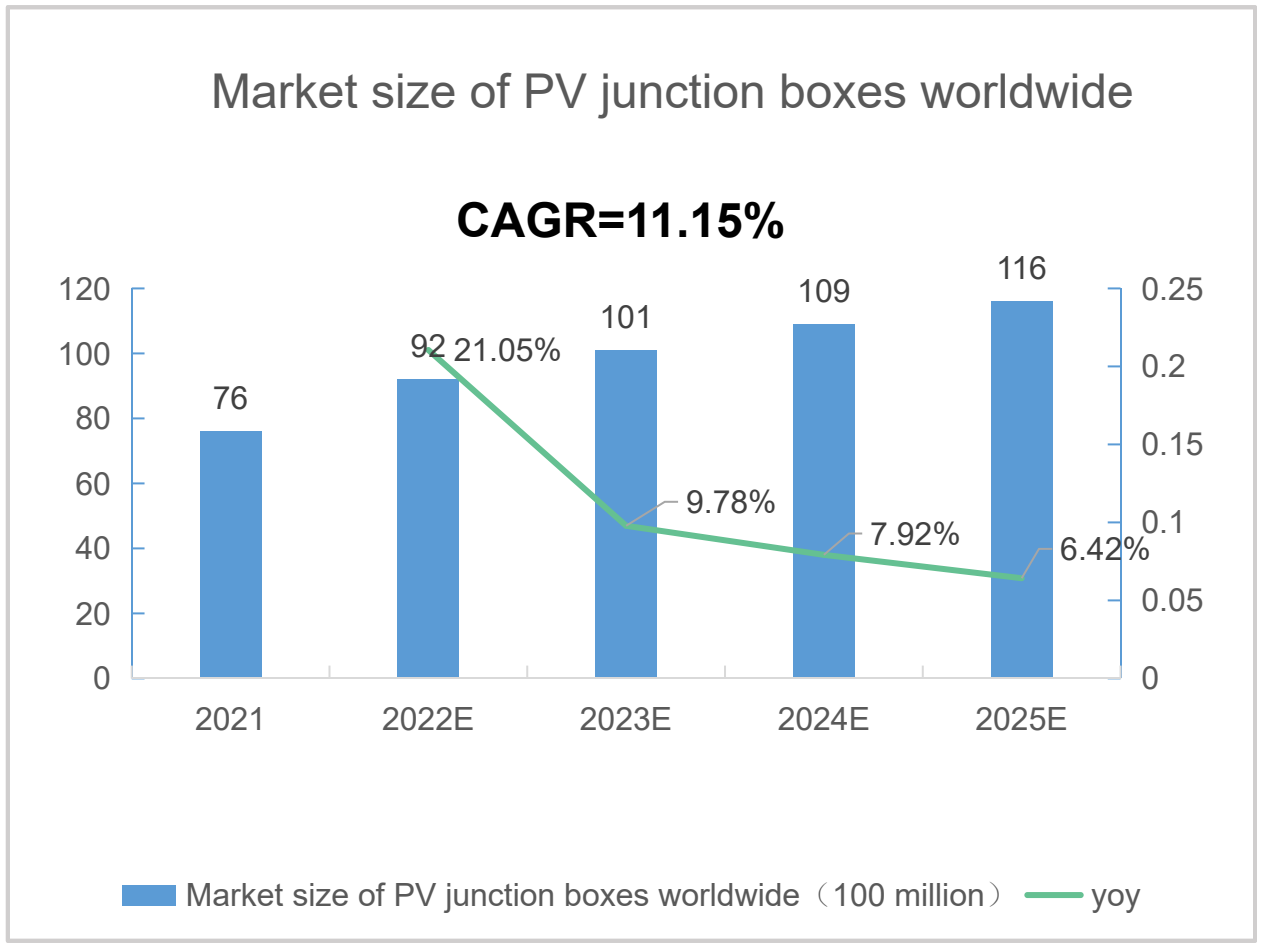
key point for purchasing & storage

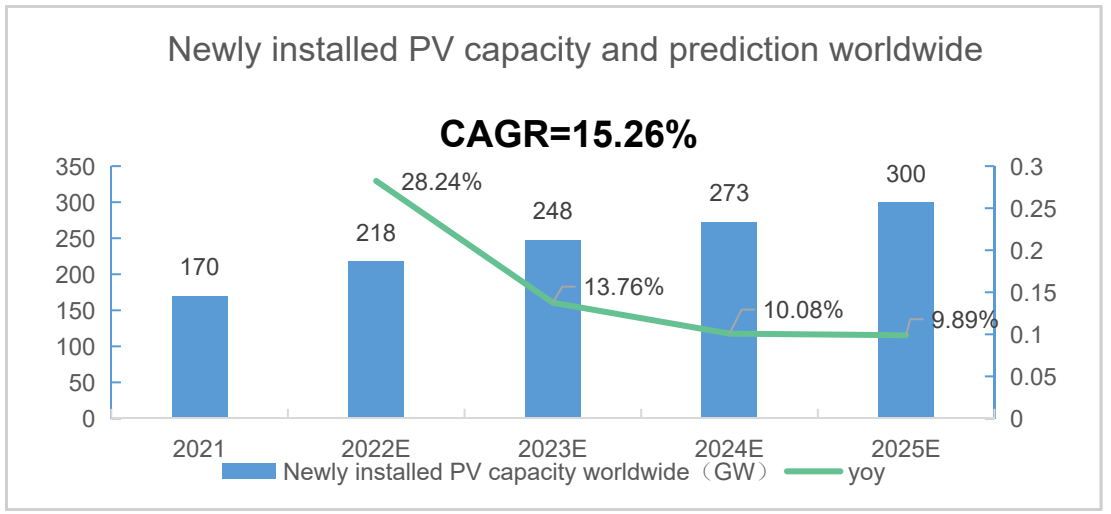
Transportation Dept.

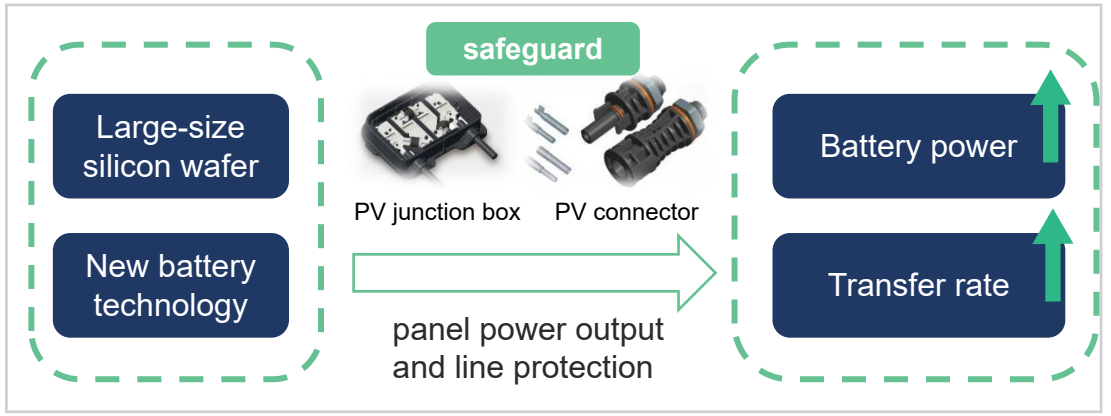
- Stability → Cooperate with global transport companies to build dedicated express line service
- Support → Take advantage of policies such as the Belt and Road Initiative
- Safety → use different packaging methods at different components to prevent frictions among them

Embracing information technology to improve the resilience and coordination ability of supply chain

2.4.1 Technical & Product Development >> Strong market demand for PV junction box







Conclusion

- The increasing number of PV installations drives the market demand for junction boxes.
- PV junctions box and connector must keep pace with battery technological innovation.

Sources: CPIA, ZHONGTAI SECURITIES

2.4.1 Technical & Product Development >> The intelligent junction box has better functions than traditional one

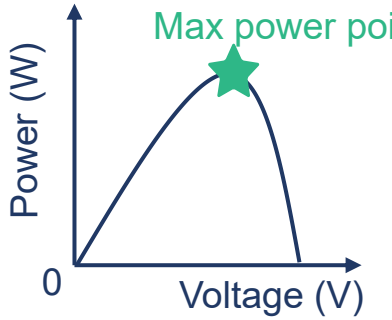
Superior functions

Advantages

Conclusion

To achieve strategic goals, we should increase R&D investment to develop intelligent junction box

1 MPPT

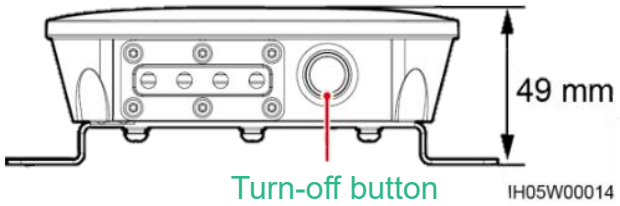


- Optimize automatically
- Track MPP in different conditions

Power generation efficiency may increase **47.5%**

ROI ↑ PP ↓

2 IntelliOff

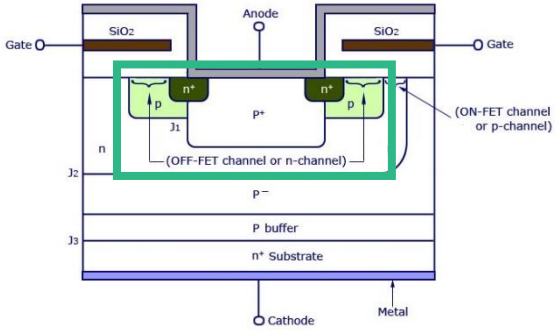


- Recognize abnormal situations (i.e. the fire)
- Cut connections among panels

Make judgements within **10ms**

Lowers the voltage from **1000V** to **40V**

3 MOSFET



- Activate bypass current when shadowed
- Low VF feature

1/10 generated heat of normal junction box ↓

Extend the service life ↑

2.4.2 Technical & Product Development >> Comparisons between Definitions and Characteristics

Technical development VS. Product development

Technical development

Prepare materials and related aspects for product development

Uncertainty | Exploratory | Risky

First Stage

VS

Second Stage

VS

VS

Product development

Application of Technical development to make an improved product

Certainty | Predictability | Referenced

The basic conditions for the formation of a new product to a large extent

2.4.2 Technical & Product Development >> Difference between Management Priorities on them

	Technical Development	Product Development
Target	Acquire technical knowledge	Realize returns
Team	Mainly professional and technical personnel	Multi-sectors cooperation
Plan	Low controllability	High controllability
Period	For a few months or up to several years	Relative periodicity determination
Investment	Big investment, hard to expect returns	Controllable input
Review	Qualitative orientation	Quanti… Budgeting …cial target)
Performance	Spirit incentives	Material incentives
Accounting Treatment	Be expensed	Be capitalized

2.4.3 Technology >>Stage Project Management and Multiple Incentive Mechanism

Project Management

Multi-Stage, Multi-Decision Review Point Project Management Method

Stage

Opportunity Discovery → Scope Determination → Technical evaluation → Detailed Research

Preliminary screening

Approach technology evaluation

Approach detailed study

Application path determination

Decision Review Point

Performance Evaluation

Maslow's hierarchy of needs

Build a **fair** and **effective multiple** incentive mechanism

Economic compensation incentive

- ✓ Link to inventions intellectual property rights
- ✓ Employees whose inventions have been patented will receive a bonus

&

Non-economic spiritual motivation

- ✓ Encourage to participate in technical exchange activities
- ✓ Develop awards for excellence

2.4.3 Technology >>Achievement Oriented Team Self-Management

Scientific Research Team Operation

Professional technical personnel

+

Marketing personnel

commonality

- **Higher level of education**
  High comprehensive quality
  Strong problem solving skills using knowledge
- **Strong job autonomy**
  Able to solve difficult problems in work independently
- **Strong achievement orientation**
  Expect social acceptance and respect from others

Practice the "people-oriented" organizational culture

- ☐ Create a friendly working atmosphere
- ☐ Give employees a sense of belonging
- ☐ Achieve harmony among colleagues
- ☐ Retain more competitive knowledge workers.

***How** to motivate researchers to practice organizational culture*

Working Atmosphere

Fair, caring and rule-oriented
Cultural identity promotes employee loyalty

Communication Mechanism

"Effective communication is the most important means of organizational management."

Emotion Management

- Conduct training courses
- Set up a psychological counseling office

2.4.4 Product >> Care about design, contact and financial situation

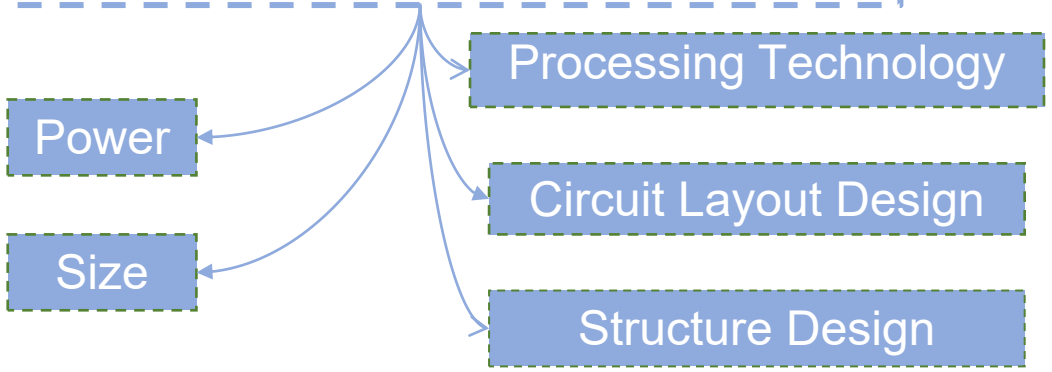
Design a product → **Build a product** → **Test a product** → **Produce a product**

Appearance design

- Draw on designs that are available on the market
- Based on customer product characteristics
- launch products that meet the differentiated needs of customers and have stable performance

Application area

Make different design for different fields



➢ Strictly define and confirm the production cycle

From raw material procurement to product acceptance into storage, each stage needs to strictly control the time and determine the approximate cost

➢ Regular Organization Convenes Meeting

Confirm the completion progress,financial situation explain the deviation

➢ Establish "product testing center"

Ensure quality assurance ability of whole test process

➢ Close interdepartmental contact

Multi-functional department representatives form a cross-functional product development team

2.4.4 Product >> Pay attention to test and Scale Production

Design a product → Build a product → Test a product → Produce a product

TEST

The terminal box is used in a variety of environments and climatic conditions

Product Quality Reliability

① Life Test

② Special Test

③ Field Test

Identify product weaknesses with limited samples, time and cost of use

Small Scale Production

The entire system is put together

- Production Supervision
- Tools and Equipment
- Assembly Sequence
- Detail Design
- Operators
- Technicians

Identify production cost brought by a certain quantity
Roughly budget the cost in Large Scale production

Large Scale Production

Aettenion

- Interruption of Development
- Product Unqualified
- Delay in the Construction Period

3 Budgeting & Risks

- Budget After Strategies
- Prediction With Five-year Roadmap
- Internal & External Risks

3.1.1 Suggestion >>Sequential Two Stages of R&D and Overcome Core Technology Firstly

If Develop Technology in Product Development

Result

- Uncertainty in Technical Development
- Progress cannot be guaranteed

R&D Investment Sequence

STAGE 1

Technical Development Stage
Choice of core technologies: important and urgent technologies

STAGE 2

Product Development Stage
Determine product positioning and further improve functionality

Marketing Mode

——R&D and Marketing Mutually Dependent

Core Technical Development Stage

- Choose independent R&D mode
- Working with downstream customers
- Cooperate with higher level institutions

Product Development Stage

- Meet customer needs.
- Guide customer requirements
- Tap potential users.

Selection and Allocation

——Choose Independent R&D Mode to Develop Core Technology

Technology	Investment
Intelligent turn-off technology	3,000,000
Maximum power point tracking(MPPT)	2,000,000

IMPORTANCE

- ✓ The security of junction boxes is extremely important

FEASIBILITY

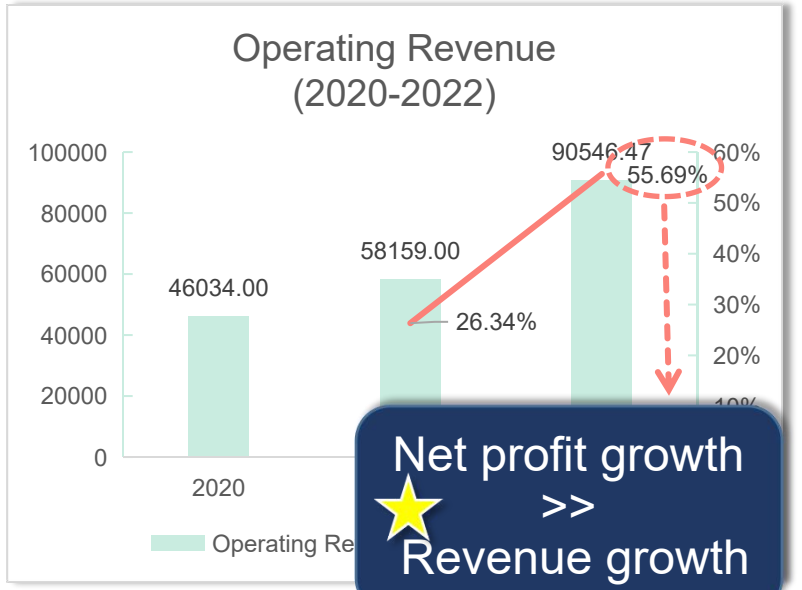
- ✓ Less difficult
- ✓ Higher probability of success

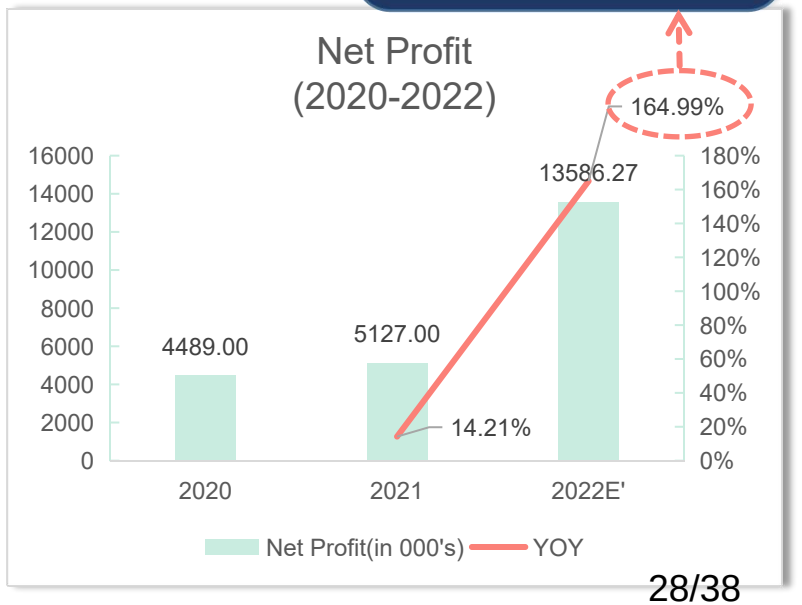
ACCOUNTING STANDARD

- ✓ Full expensing
- ✓ Meet the budget target

3.1.2 Budget After Strategies >> Hit revenue target, and net profit margin becomes the main driver of ROE

	2022E	Vertical integration	Overseas markets	IDS and TPM	Intelligent junction box	2022E'
Operating Revenue	**71601.41**		**17513.03**	**1432.03**	Exceed 73000!	**90546.47**
Operating Cost	58475.58	-5625.73	13213.58	-849.90		65213.54
Gross Profit	13125.82	5625.73	4299.45	2281.93		25332.93
Gross Profit Margin	18.33%					27.98%
Taxes and Surcharges	195.75					280.69
Operating Expense	1239.75					1702.27
Administrative Expense	1682.96					2308.93
R&D Expense	3582.59		All expensed		500	5027.32
Financial Expense	204.72					261.50
Operating Profit	6220.06					15752.20
Income Tax	855.26					2165.93
Net Profit	**5364.80**				Almost 7000×2!	**13586.27**
Net Profit Margin	**7.49**	△ROE=(15%-8.82%)×1.15×1.87=13.29%				**15.00%**





3.2 Prediction With Five-year Roadmap >> Our goal is quite achievable

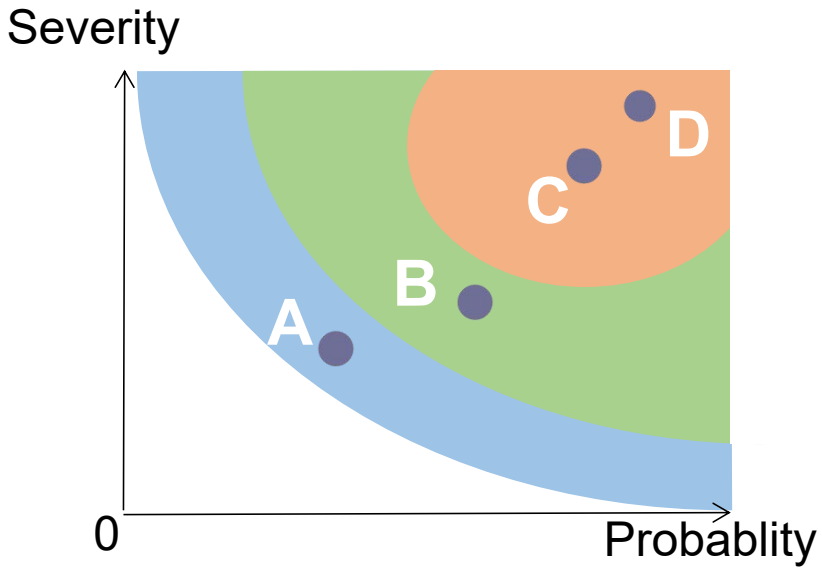
Target \ Time	Year 2021 H1	Year 2021 H2	Year 2022 H1	Year 2022 H2	Year 2023 H1	Year 2023 H2	Year 2024 H1	Year 2024 H2	Year 2025 H1	Year 2025 H2	Priority
• Vertical integration: Extending industrial chain to PV cell		■	■	■	■	■	■	■	■		★★★★★
Production&Quality Center											
• Install intelligent detection system		■	■	■							★★★★
• Full production and maintenance(TPM)		■	■	■	■	■	■	■	■		★★★★★
• Develop circular economy			■	■	■	■	■	■	■		★★★
• Reasonable inventory measurement		■	■	■	■	■	■	■	■		★★★
Market Center											
• Open up overseas market			■	■	■	■	■	■	■		★★★★★
• Matrix Marketing	■	■	■	■	■	■	■	■	■		★★
• Train sales staff systematically		■		■		■		■		■	★★★
• Provide perfect after-sales	■	■	■	■	■	■	■	■	■		★★★★
Supply chain Center											
• Achieve automated trading by AI					■	■	■	■	■		★★★★
• Use ERP system for inventory management			■	■	■	■	■				★★★
• Cooperate with global transport companies			■	■	■	■	■	■	■		★★★

Given moretime

1. Analyze the performance of new business to decide the future develop plans.
2. Explore the deep demand of clients and enlarge the targeted customers to get more profit.

3.3 Risk identication >> Especially the risks in the process of operation and financial position

Risk Map



A: Structure	C: Operational
external circumstances	the process of operation
B: Competition	**D: Financial**
competitors & industry	financial position analysis

Classfications

A.Structure risks
- Preferential policies for PV module imports in some overseas regions may not be permanent
- Vertical integration--Risk of battery core technology iteration

B.Competition risks
- Chinese industry pioneers have taken the lead in opening up overseas markets, where competition is fierce

C.Operational risks
- The production scale is difficult to improve rapidly
- The professional skills of personnel and operators cannot meet the needs

D.Financial risks
- Liquidity risk of long project recovery cycle
- High debt risk of LBO

Solutions

- Timely follow up local governments' policies, overseas market conditions, and make timely solutions
- Selecting new technology (HJT) production line for production

- Strengthen efforts to reduce costs and increase efficiency in overseas exports

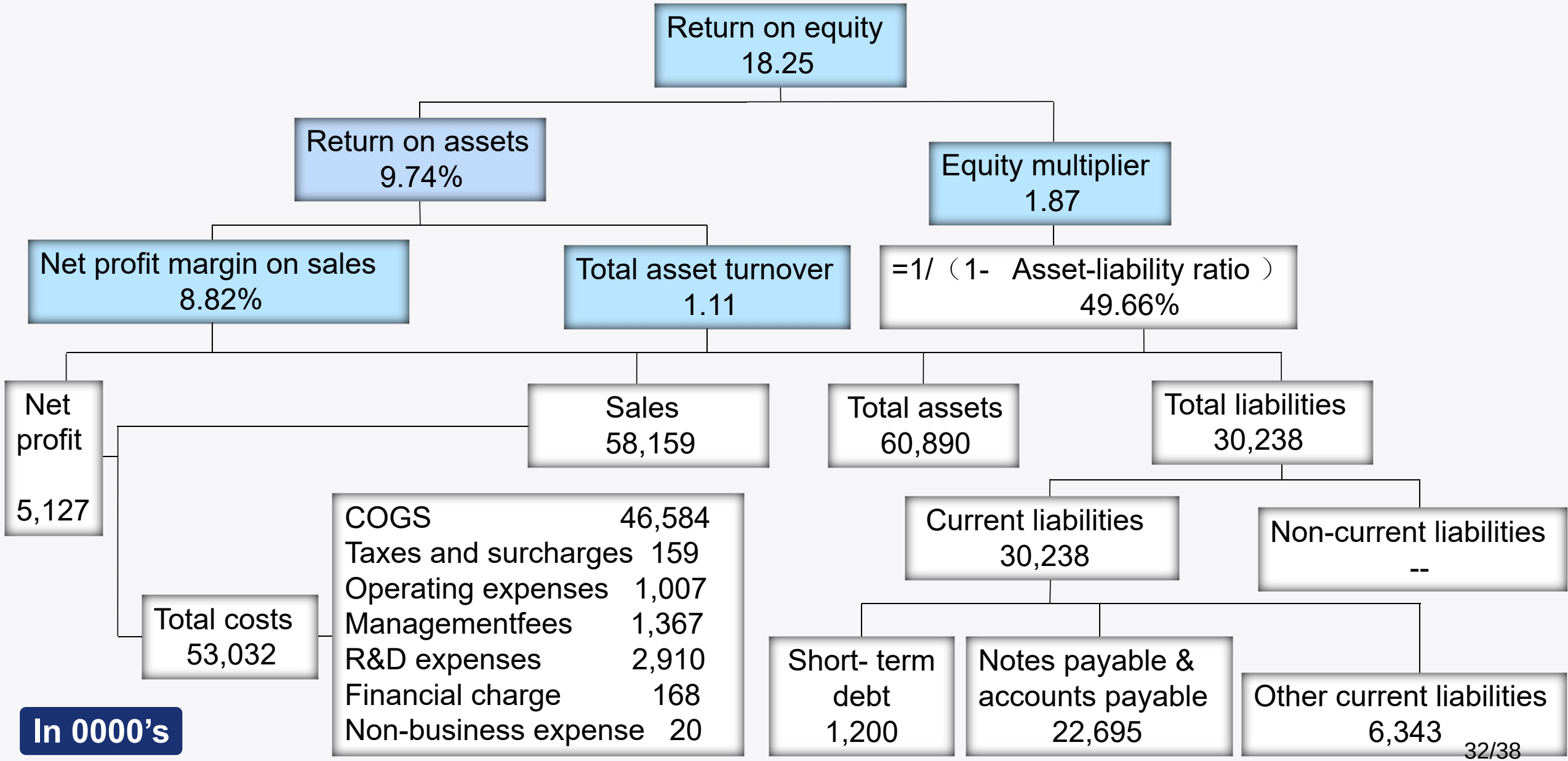
- Ensure the production and operation system is complete and correct in all aspects of small-scale production
- Train the professional skills of the operators

- Make full use of production line equipment to form pipeline
- Streamline the organization and improve profitability

TEAM: Floraison

Thank you!

Appendix 1 >> DuPont Model



In 0000's

Appendix 2 >> Current Budget

	A	B	C
19			
20		2021	2022E
21	Unit Price	18.58	18.95
22	Operating Revenue(0000's)	58159	71601.41
23	Sales Volume(0000's)	3130.19	3778.12
24	Operating Cost(0000's)	46584	58475.58
25	Gross Profit(0000's)	11575	13125.82
26	Gross Profit Margin	19.90%	18.33%
27	Unit Cost	14.88	15.48

	A	B	C
19			
20		2021	2022E
21	Unit Price	18.58	=B21*1.02
22	Operating Revenue(0000's)	58159	=C21*C23
23	Sales Volume(0000's)	=B22/B21	=B23*(1+I21)
24	Operating Cost(0000's)	46584	=C27*C23
25	Gross Profit(0000's)	11575	=C22-C24
26	Gross Profit Margin	=B25/B22	=C25/C22
27	Unit Cost	=B24/B23	=B27*1.04

Appendix 3 >> Implementation-Vertical integration

	I	J	K	L	M
127		2021	2022E	2022E(Vertical integration)	
128	Unit Price	18.58	18.95	18.95	
129	Operating Revenu	58159	71601.41	71601.41	
130	Sales Volume(000	3130.19	3778.12	3778.12	
131	Operating Cost(0	46584	58475.58	52849.86	-5625.73
132	Gross Profit(000	11575	13125.82	18751.55	5625.73
133	Gross Profit Mar	19.90%	18.33%	26.19%	
134	Unit Cost	14.88	15.48	13.99	

	I	J	K	L	M
127		2021	2022E	2022E(Vertical integration)	
128	Unit Price	18.58	18.9516	18.95	
129	Operating Revenue(0000's)	58159	71601.405988	71601.405988	
130	Sales Volume(0000's)	3130.19375672766	3778.11931383102	3778.11931383102	
131	Operating Cost(0000's)	46584	58475.5835407059	=(L129-L132)	=L131-K131
132	Gross Profit(0000's)	11575	13125.8224472941	=L129*L133	=L132-K132
133	Gross Profit Margin	0.199023366976736	0.18331794279981	=K133*1.4286	
134	Unit Cost	14.8821458415722	15.4774316752351	=L131/L130	

Appendix 4 >> Implementation-IDS and TPM

	B	C	D	E	F
221		2021	2022E	2022E(IDS and TPM)	
222	Unit Price	18.58	18.95	18.95	
223	Operating Revenue(0000's)	58159	71601.41	73033.43	1432.02812
224	Sales Volume(0000's)	3130.19	3778.12	3853.68	
225	Operating Cost(0000's)	46584	58475.58	57625.69	-849.8976508
226	Gross Profit(0000's)	11575	13125.82	15407.75	2281.93
227	Gross Profit Margin	19.90%	18.33%	21.10%	
228	Unit Cost	14.88	15.48	14.95	
229	Direct Material(0000's)		46780.47	46307.94	
230	Direct Labour(0000's)		5847.56	5555.18	
231	Cost of intelligent detection system(0000's)			500	
232					

	B	C	D	E	F
221		2021	2022E	2022E(IDS and TPM)	
222	Unit Price	18.58	18.9516	18.9516	
223	Operating Revenue(0000's)	58159	71601.405988	=E222*E224	=E223-D223
224	Sales Volume(0000's)	3130.19375672766	3778.11931383102	=D224*1.02	
225	Operating Cost(0000's)	46584	58475.5835407059	=(E229+E230)/0.9	=E225-D225
226	Gross Profit(0000's)	11575	13125.8224472941	=E223-E225	=E226-D226
227	Gross Profit Margin	0.199023366976736	0.18331794279981	=E226/E223	
228	Unit Cost	14.8821458415722	15.4774316752351	=E225/E224	
229	Direct Material(0000's)		=D225*0.8	=D229*0.98/0.99	
230	Direct Labour(0000's)		=D225*0.1	=D230*0.95	
231	Cost of intelligent detection system(0000's)			500	

Appendix 5 >> Implementation-Overseas markets

	J	K	L	M	N
28					
29		2021	2022E	2022E(Overseas markets)	
30	Unit Price	18.58	18.95	18.95	
31	Operating Revenue	58159	71601.41	89114.44	17513.03
32	Sales Volume	3130.19	3778.12	4702.29	
33	Operating Cost	46584	58475.58	71689.17	13213.58
34	Gross Profit	11575	13125.82	17425.27	4299.45
35	Gross Profit Margin	19.90%	18.33%	19.55%	
36	Unit Cost	14.88	15.48	15.25	
37	Operating Expense	1007	1239.75	1675.35	435.60
38	Operating Expense Rate	1.73%	1.73%	1.88%	
39	Administrative Expense	1367	1682.96	2094.59	411.64
40	Administrative Expense Rate	2.35%	2.35%	2.35%	
41	Taxes and Surcharges	159	195.75	277.88	82.13
42	Taxes and Surcharges Rate	0.27%	0.27%	0.31%	

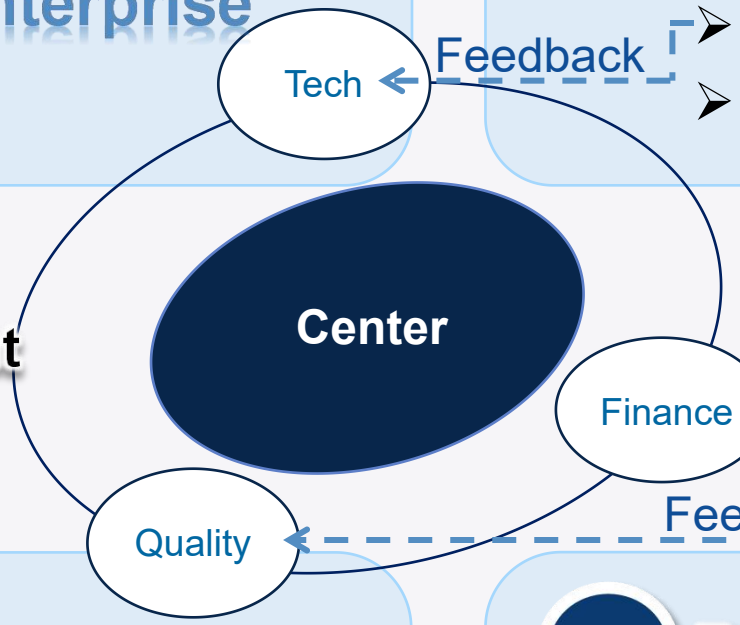
	J	K	L	M	N
29		2021	2022E	2022E(Overseas markets)	
30	Unit Price	18.58	18.9516	18.95	
31	Operating Revenue	58159	71601.405988	=L31+D24	=M31-L31
32	Sales Volume	3130.19375672766	3778.11931383102	=L32+D23	
33	Operating Cost	46584	58475.5835407059	=L33+D29	=M33-L33
34	Gross Profit	11575	13125.8224472941	=M31-M33	=M34-L34
35	Gross Profit Margin	0.199023366976736	=L34/L31	=M34/M31	
36	Unit Cost	14.8821458415722	15.4774316752351	=M33/M32	
37	Operating Expense	1007	=L38*L31	=M38*M31	=M37-L37
38	Operating Expense Rate	=K37/K31	=K38	=B6	
39	Administrative Expense	1367	=L40*L31	=M40*M31	=M39-L39
40	Administrative Expense Rate	=K39/K31	=K40	=L40*(1+N38)	
41	Taxes and Surcharges	159	=L42*L31	=M42*M31	=M41-L41
42	Taxes and Surcharges Rate	=K41/K31	=K42	=(B9+G9)/2	

1 Hightlight the title ——

"National High-tech Enterprise"

3 Sales staff need to:

- be trained systematically
- exploit new demands
- organize customer information



Market Planning Department

Sales Department

Distributed PV trend

2 Matrix Marketing

	Domestic	Abroad
Search Engines	Baidu	Google
Office Software	Wechat	E-mail
Social Media	Microblog	Meta

4 Provide perfect after-sales

- Product Maintenance
- Free Cleaning
- Function Consultation

Comparison of different types of R&D models

Independent R&D

Advantages

1.Break technological monopoly
2.Optimal decision for product extension
- Get lower wholesale prices
- Alleviate the double marginal effect of products

3.Gain the favor of capital
4.Obtain the support of national policies

Advantages

1.High capital and talent requirements
2.High technical barriers
3.Difficult to overcome in the short term

Cooperative R&D

Disadvantages

Realize the complementarity of talents, technologies and resources

Disadvantages

1.Opportunistic behavior is the biggest risk
- Targeted measures are needed to reduce risks

2.How to distribute the final R&D fruits and benefits
3.How to bear the loss