Opto Tech Corporation

2021.08.31

Safe Harbor Statement

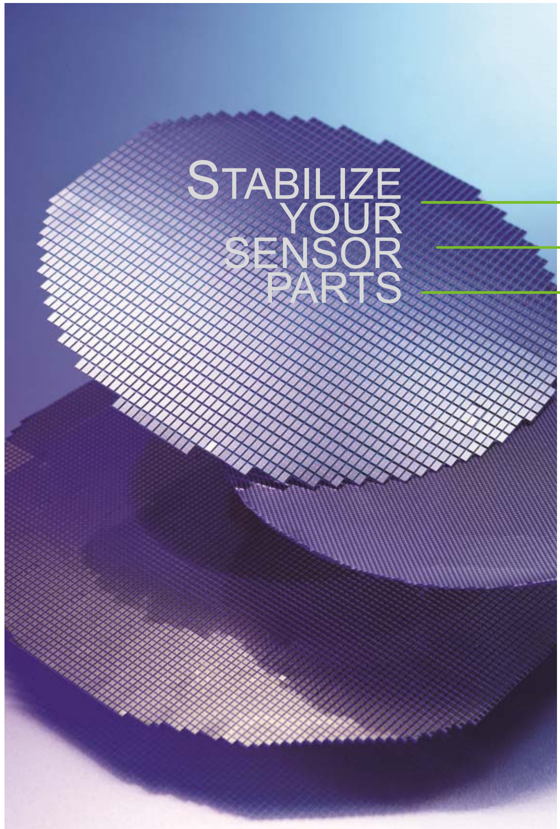
- This Presentation contains certain forward-looking statements that are based on current expectations and are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements.
- Except as required by law, we undertake no obligation to update any forward–looking statements, whether as a result of new information, future events or otherwise.

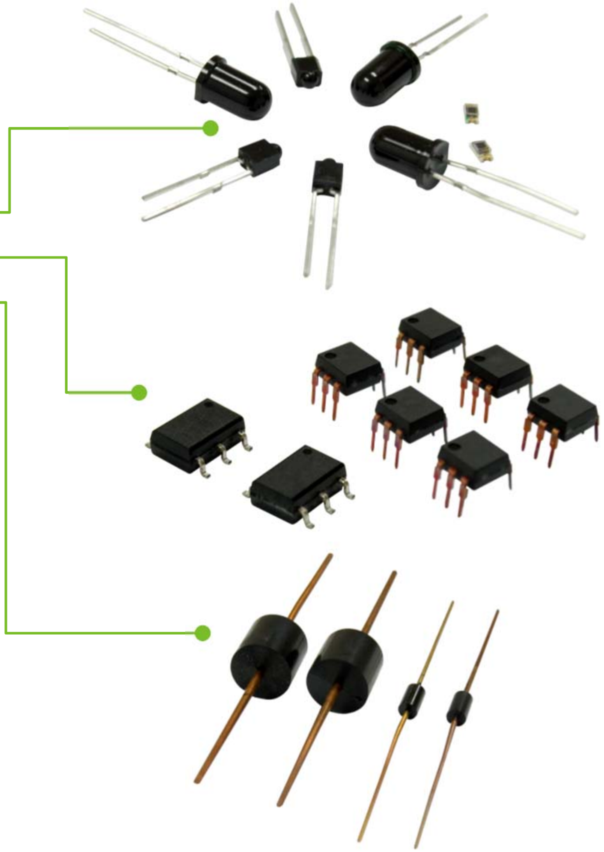
Company profile

Date of founded	Dec 21, 1983
Paid in Capital	NT 4,386,228,460元
Main Products	Sensor Chips ,LED Chips
Factory site	(I) No. 1, Li-hsin Rd. V, Hsinchu Science Park (II) No. 8, Innovation Rd I, Hsinchu Science Park
Monthly Capacity	Around 2.0 billion units for LED chips Around 3.0 billion units for sensor chips
Employees	Around 1,000persons

Sensor chips

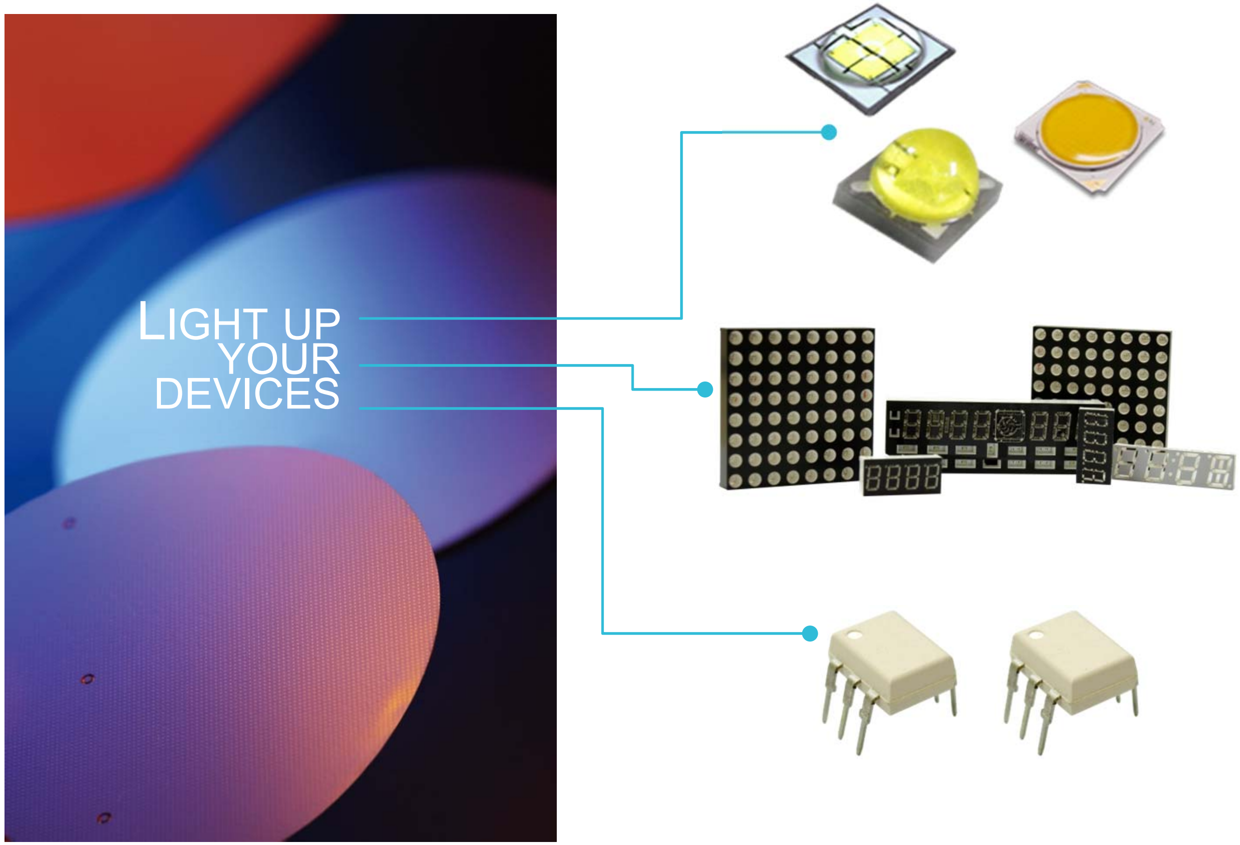
- Photo diode
- Photo transistor
- Zenar diode





LED Chips

- Visible LED Chips
- Invisible IR LED Chips



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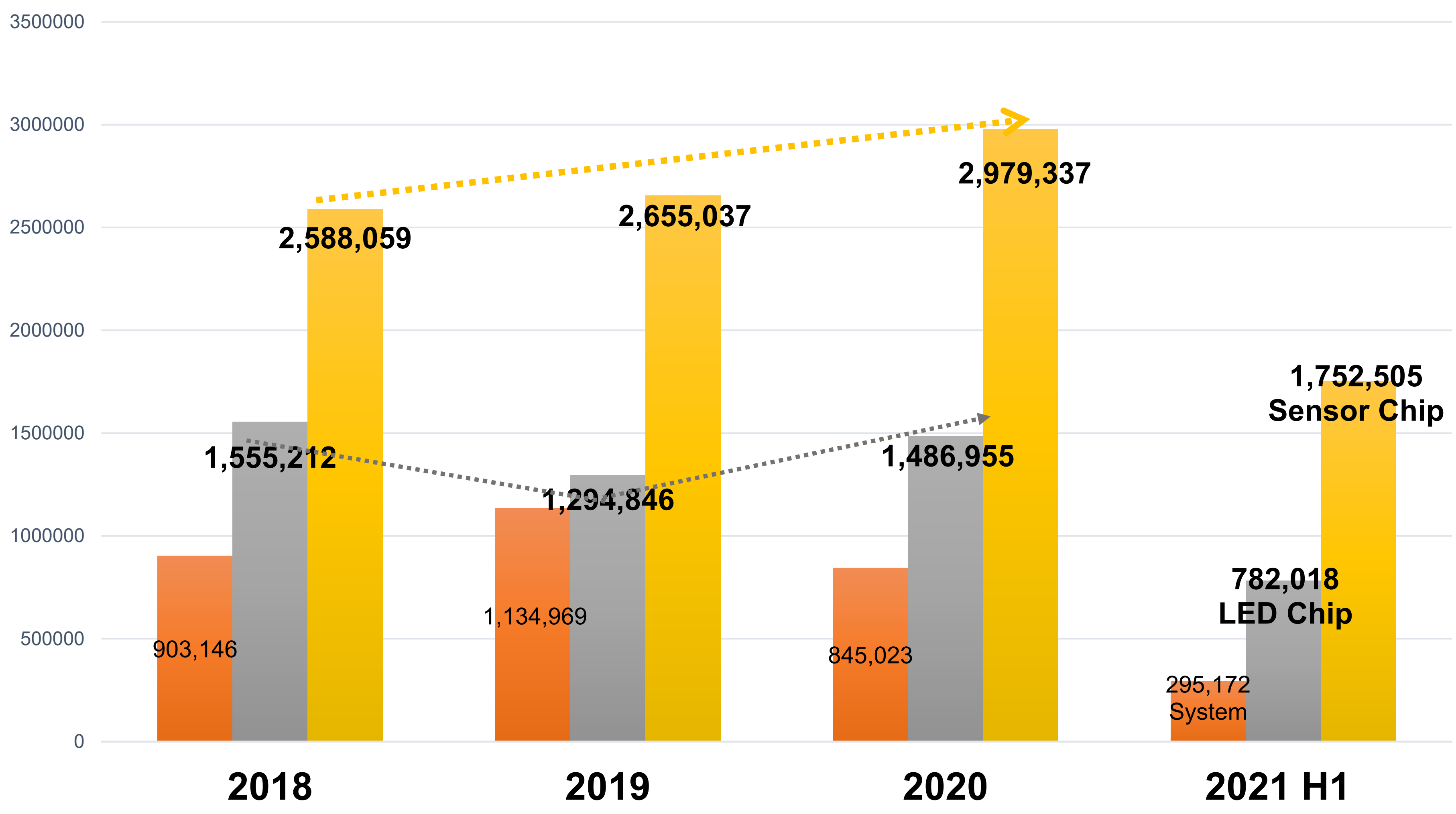
Main products Allocation-by Revenue



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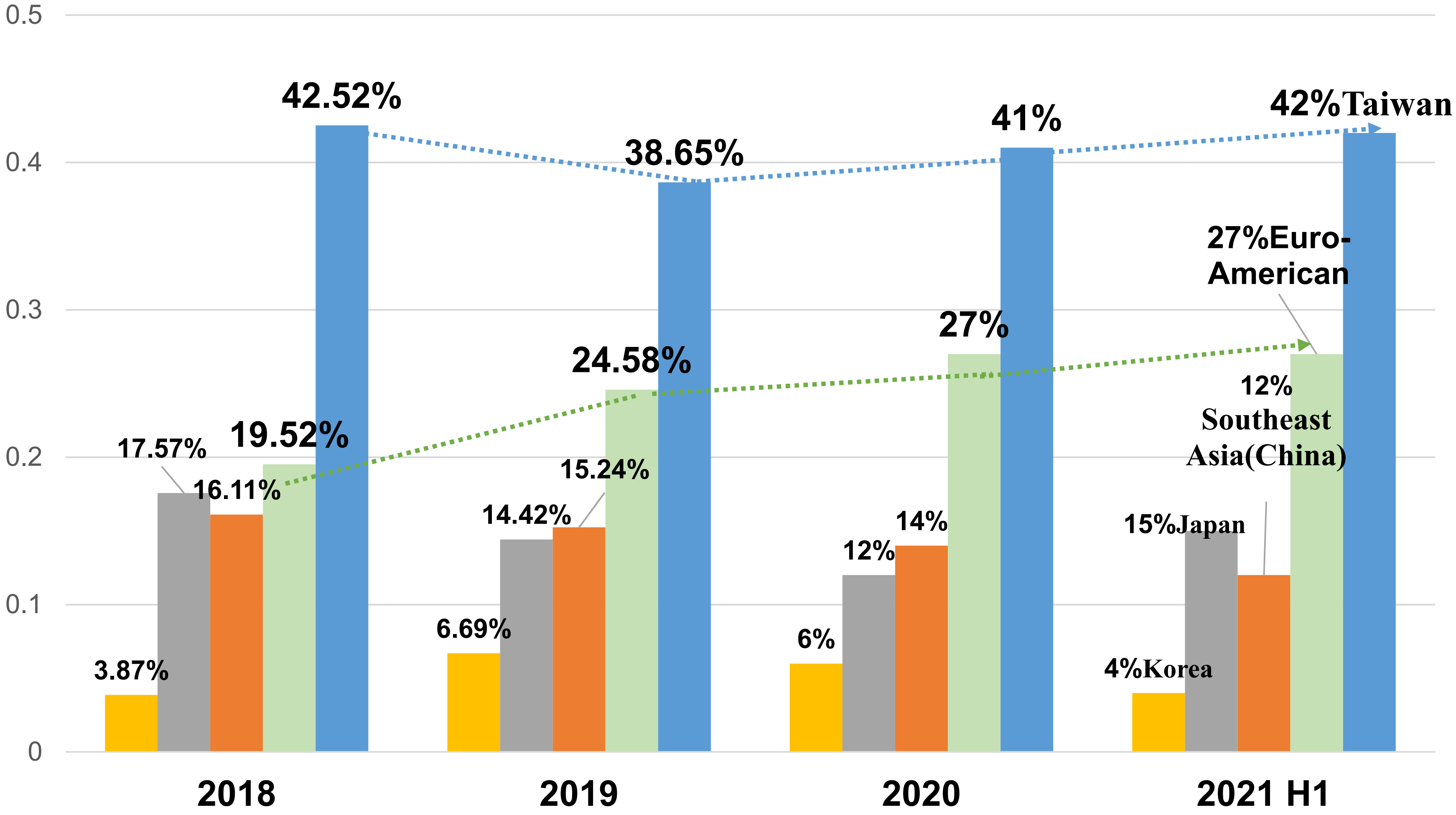
LED Chips & Sensor Chips
Product sales Breakdown by Area



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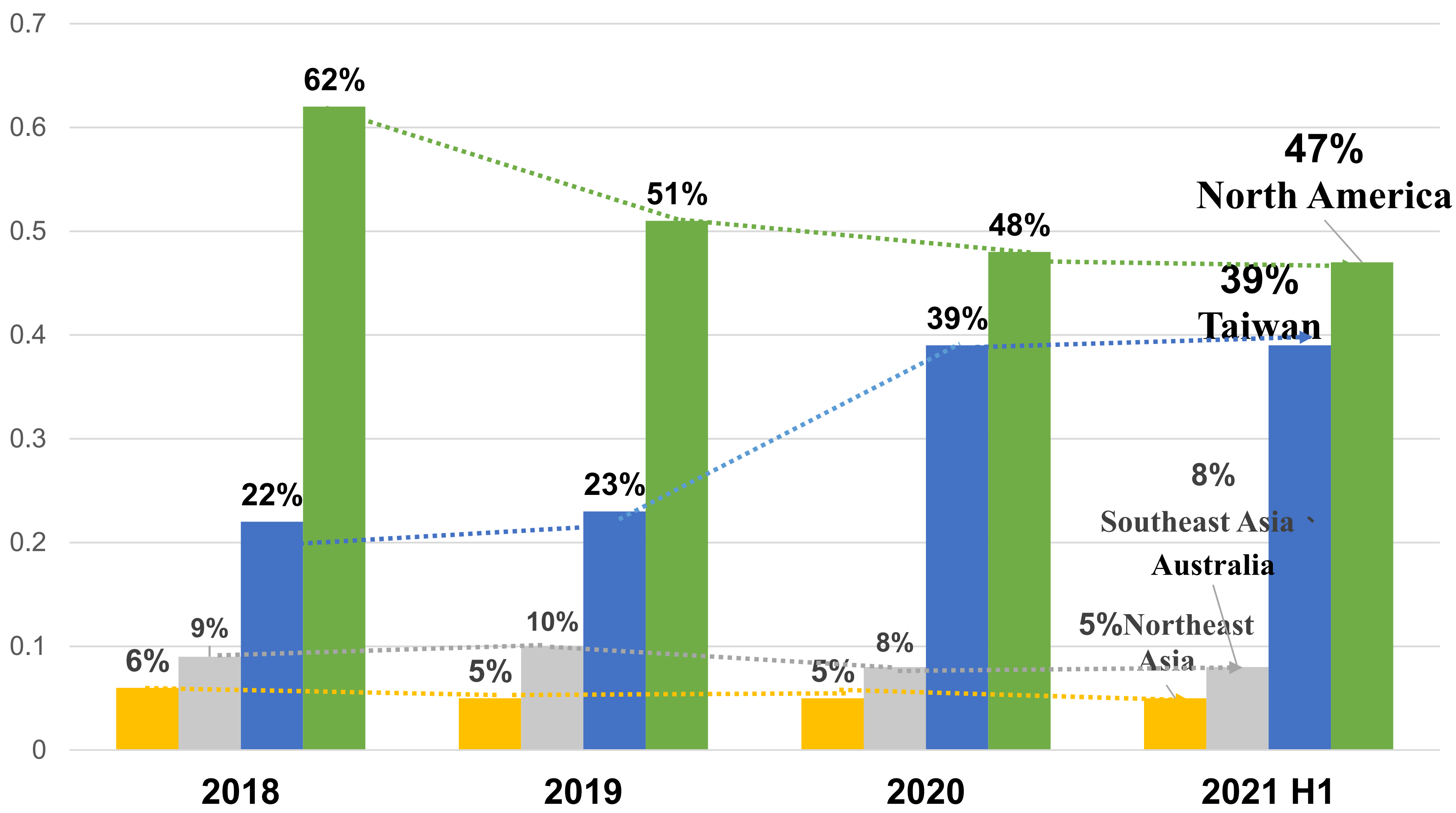
System Products
Product sales Breakdown by Area



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Consolidated Statements of Income

	2020 Q1-Q2		2021 Q1-Q2		YoY
In NT thousands	Amount	%	Amount	%	%
Operating revenue	2,541,994	100.00%	2,967,279	100.00%	16.73%
Gross profit, net	708,248	27.86%	944,550	31.83%	33.36%
Operating expenses	441,223	17.36%	442,924	14.93%	0.39%
Operating income	267,025	10.50%	501,626	16.91%	87.86%
Income tax expense	60,780	2.39%	98,461	3.32%	62.00%
Net income	191,521	7.53%	428,055	14.43%	123.50%
Basic EPS(NT$)	0.51		1.16		

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Consolidated Balance Sheets
(Important Items)

	2020 Q2		2021 Q2	
(In NT thousands)	AMOUNT	%	AMOUNT	%
Cash and cash equivalents	2,968,119	29%	2,583,941	25%
Accounts receivable	1,719,308	16%	1,321,148	12%
Inventories	1,377,303	13%	1,118,357	11%
Property, plant and equipment - net	2,798,782	27%	2,551,768	24%
Total assets	10,454,524	100%	10,611,887	100%
Short-term loans	238,085	2%	183,898	2%
Accounts payable	1,702,512	17%	1,807,238	17%
Long-term loans	776,798	7%	0	0%
Total Liabilities	3,415,197	33%	3,142,242	30%
Capital	3,786,228	36%	3,786,228	36%
Unappropriated earnings	1,599,160	15%	2,275,046	21%
Total equity	7,039,327	67%	7,469,645	70%
Book Value Per Share(dollars)	18.62		20.23	

Business Strategies and Trends

Business strategies, market trends, product portfolio

Operations management

Unit: NT$ Millions

	2020H1	2021H1	Difference
Operating revenue	2,542	2,967	425
Gross profit	708	945	237
Gross margin	28%	32%	4%
Net profit after tax	192	428	236
Net profit margin	8%	14%	6%
EPS	0.51	1.16	0.65

2020Q4 → 2021Q1 → 2021Q2 → 2021Q3

Business model

- Cancel consignment hub and rebate

Re-organization

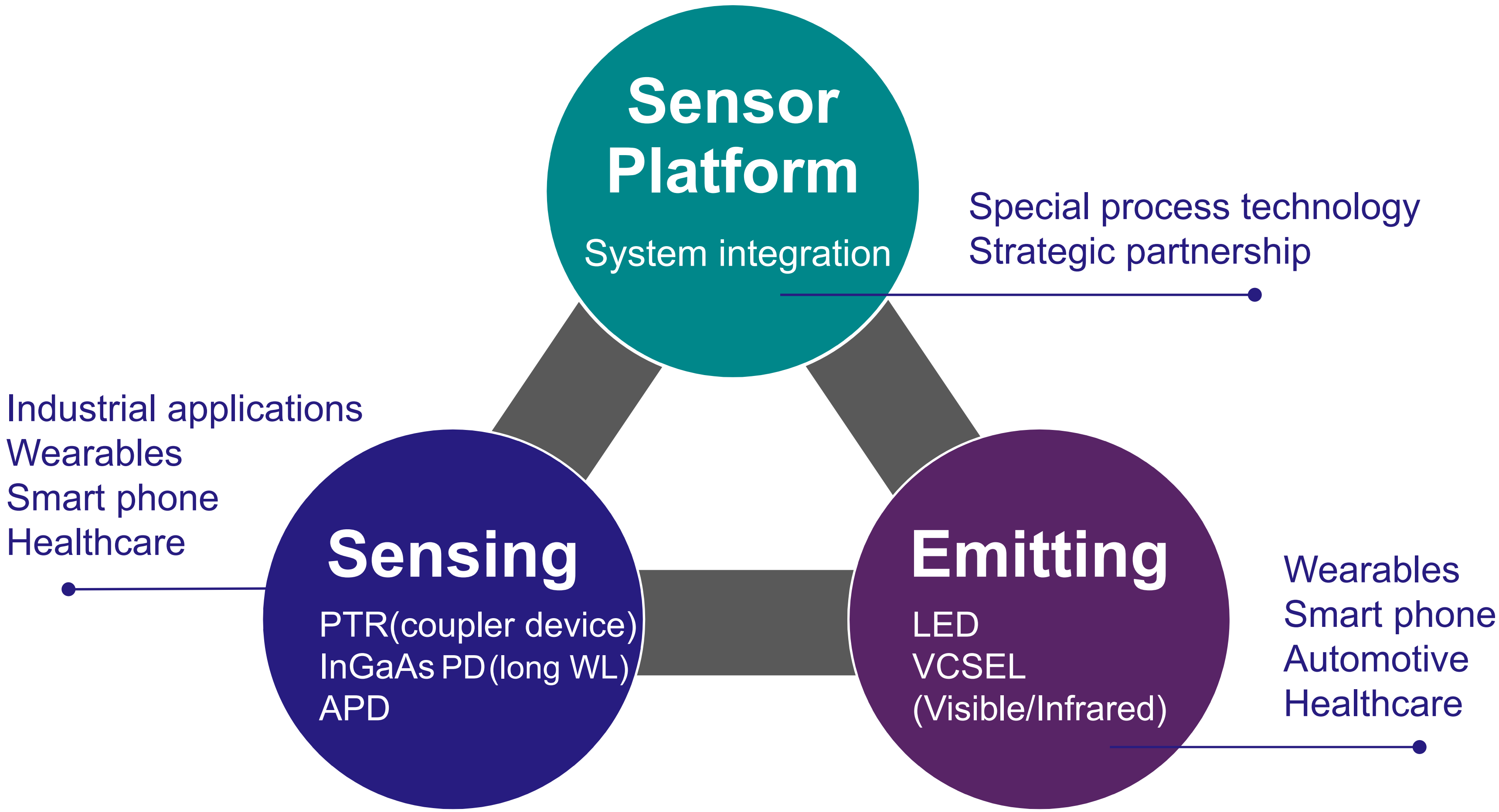
- Reduce operating cost
- Improve production efficiency

Adjust pricing strategies

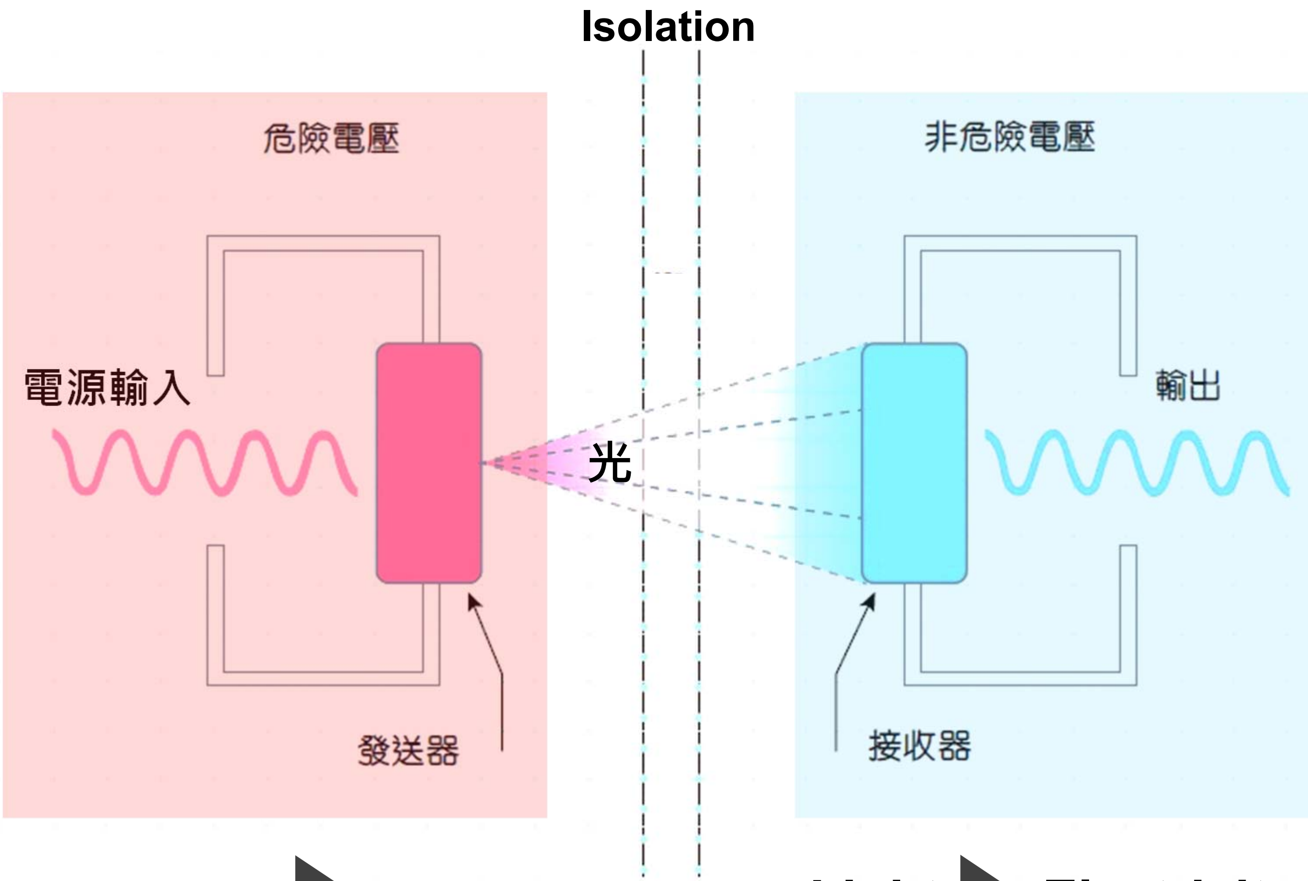
Product Mix

- Focus on competitive products
  - ✓ General PTR ▶ High performance PTR (SoC)

Directions and Strategies



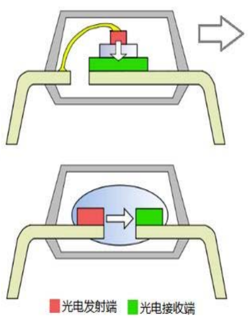
Coupler – a combination of emitting and sensing devices

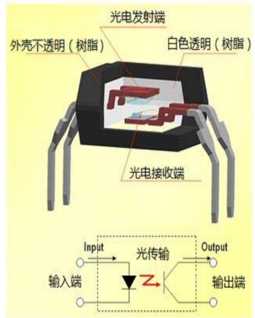


Electricity ▶ Light　　**Light ▶ Electricity**

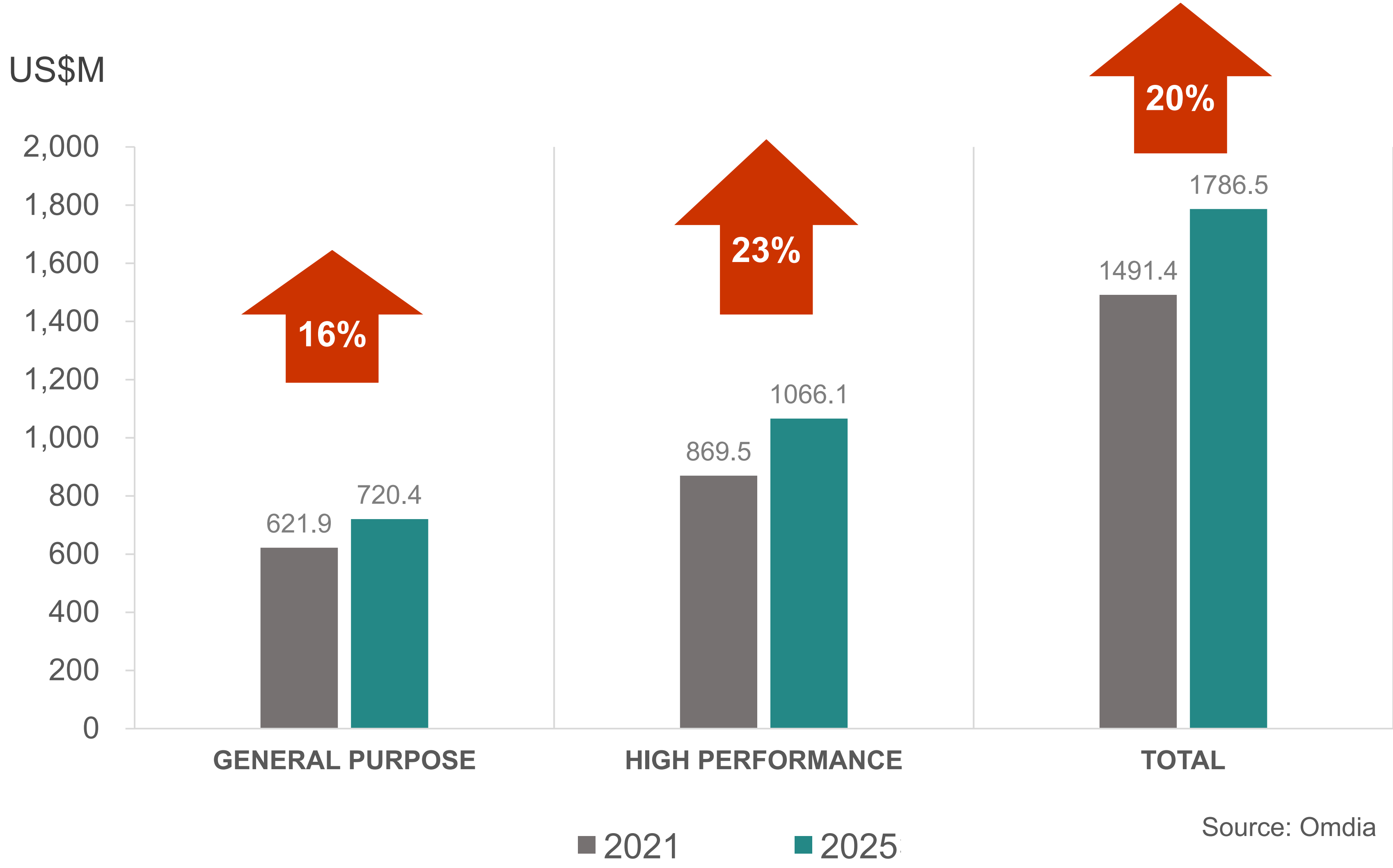
Features

- Electrical isolation
- Unidirectional transmission
- Anti-noise
- Anti-interference
- Excellent impact resistance
- Long lifetime





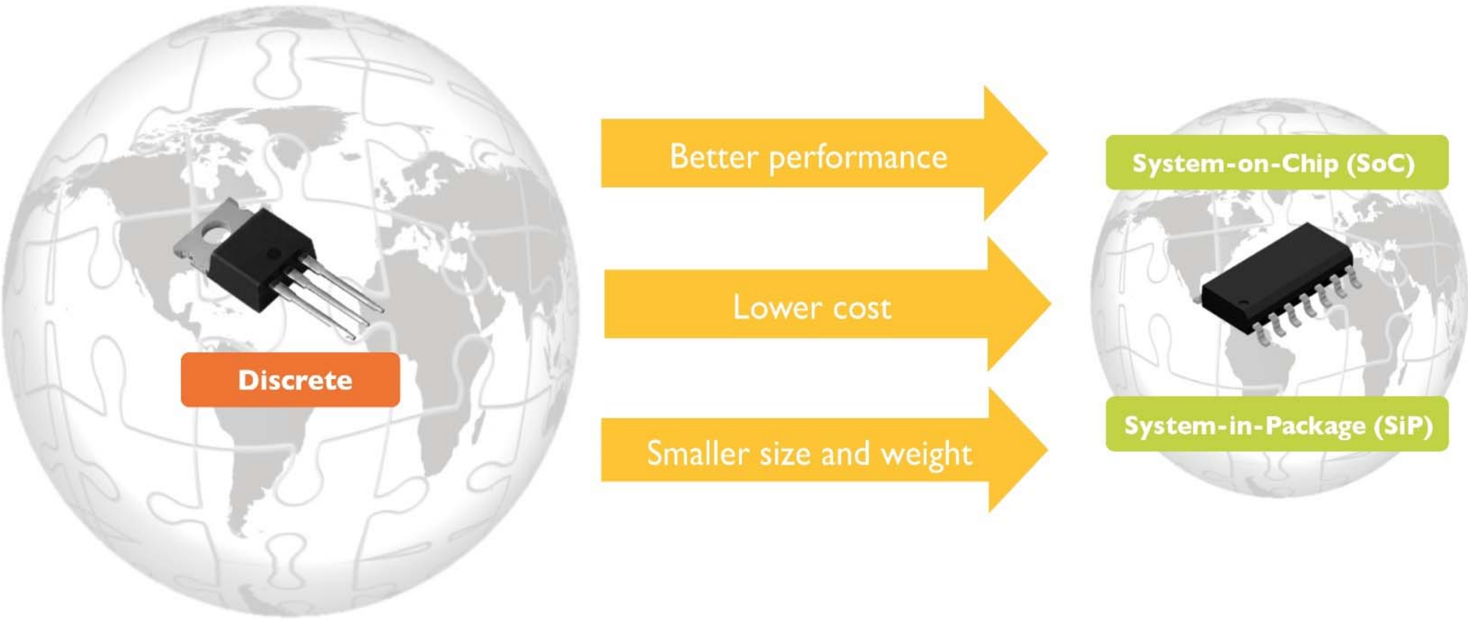
Global market for photo relays and photocouplers



Source: Omdia

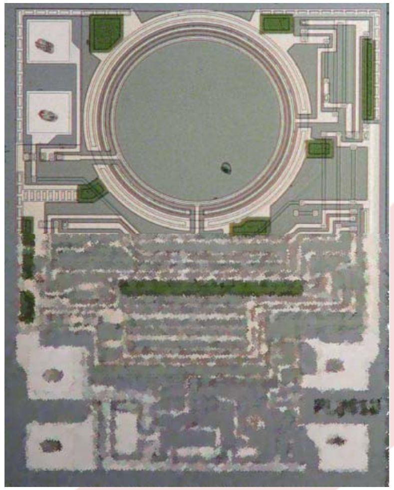
Packaging innovations are increasingly focused on integrated devices, which offer higher added-value compared to discrete devices

(Source: Discrete Power Device Packaging: Materials Market and Technology Trends 2019 report, Yole Développement, 2019)



Photocoupler sensing devices

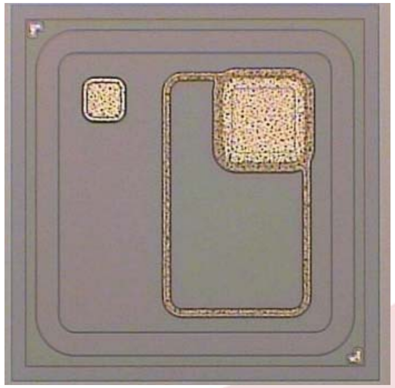
High performance type



High performance PTR

- High speed
- High voltage
- Customization

General type



Capital expenditures

Establishment of new model equipment	• New products	• High performance PTR • VCSEL/LED (long Wavelength) • PD (long Wavelength)
	• New process requirements	
Capacity expansion	• Remove production bottlenecks to meet strong customer requirements	
Quality and efficiency	• CIM upgrade • Equipment automation (New Smart Technology)	

Optotech Investor Conference

New Smart Technology Briefing

AI Solution Provider of Optical and Vision

By Stone Shih
2021.08.31

- Focusing on the field of optical imaging for years, mastering technical advantages, and specializing in the advanced optical imaging inspection market.
- High-end AI recognition technology as core technology and develops the optical inspection systems with higher technical thresholds.

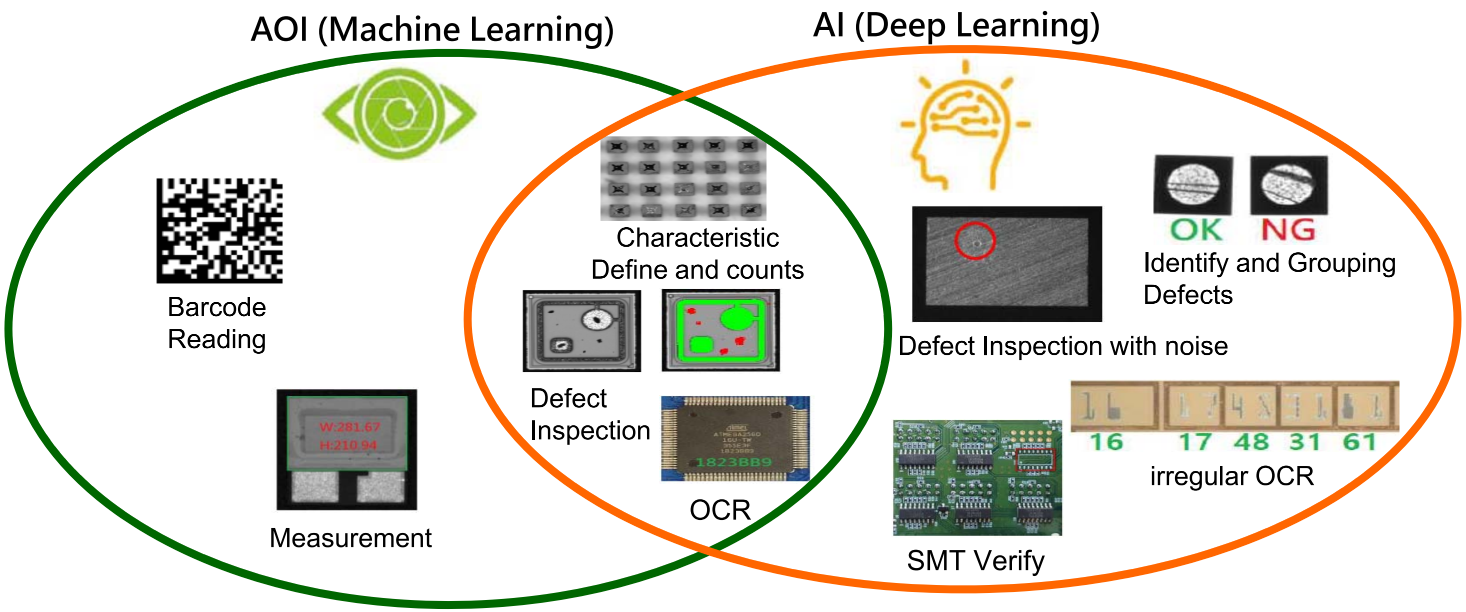
New Smart Technology

High-end AI solution provider of optical and vision

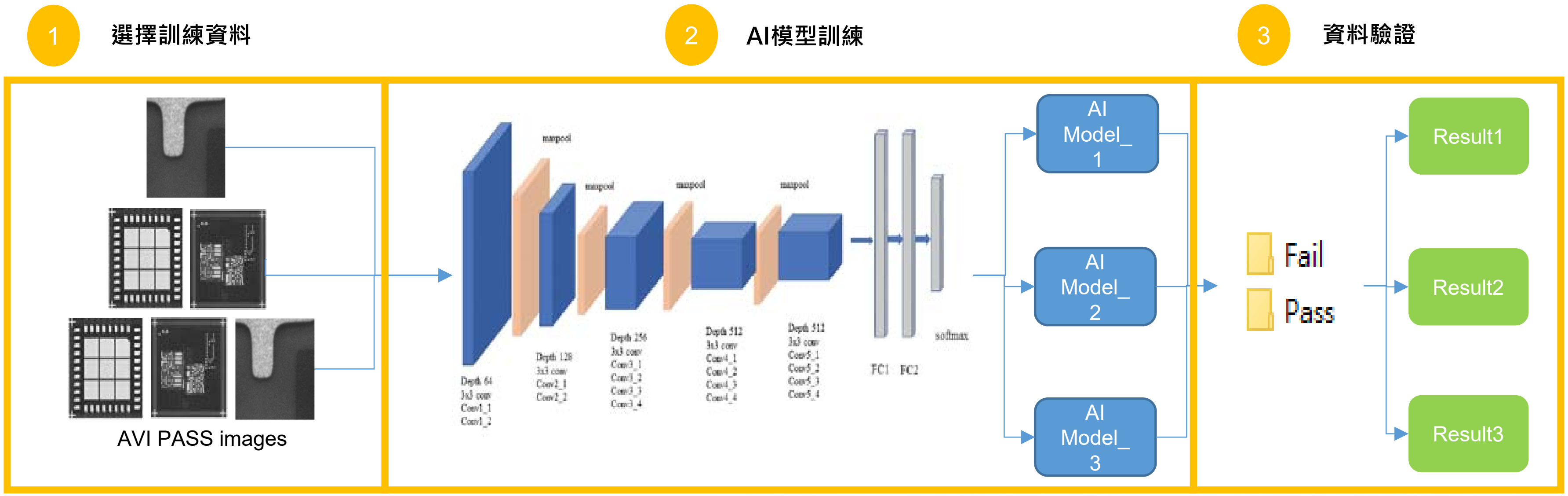
- **Camera Module**
  Image Testing Solution
- **3D Sensing Module**
  Optical Testing Solution
- **Semiconductor**
  AI Defect Inspection Solution
- **Lens**
  AOI Defect Inspection Solution

✓ **Yr. 2021: Revenue Increased and profited**
✓ **Yr. 2022: Continually growing**

◆ Differences between Traditional AOI and AI



◆ NST AI Algorithm of Vision Recognition

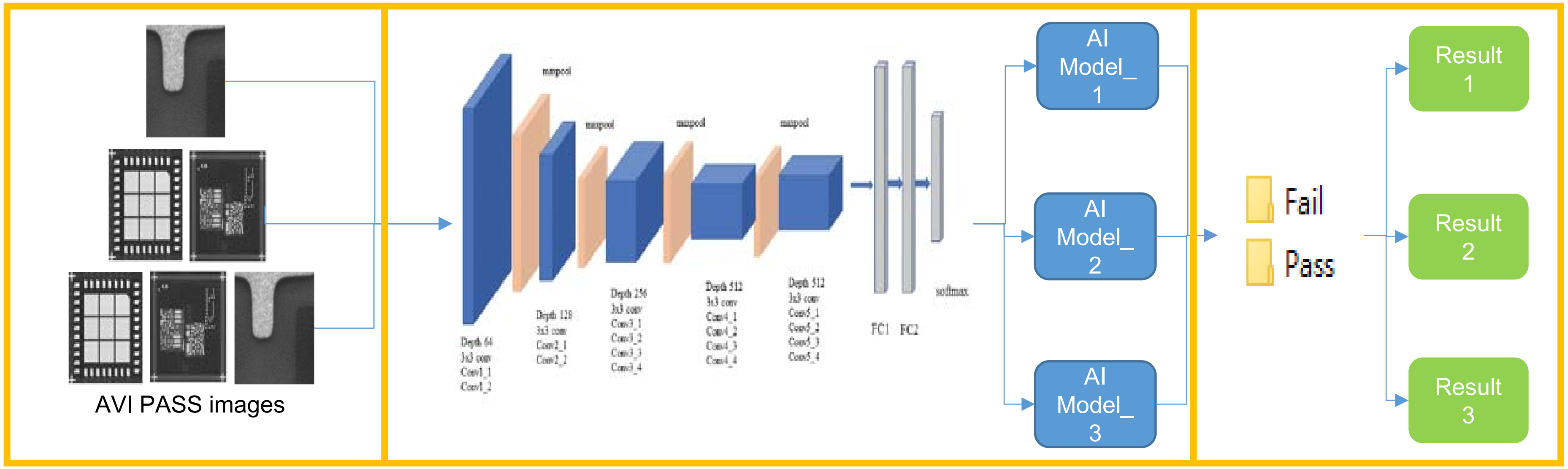


AI Algorithm of Vision Recognition

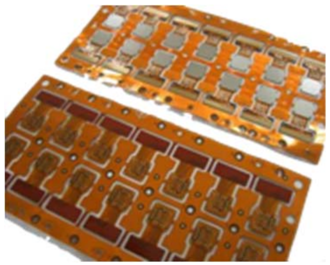
1 Training Data input

2 AI model Training

3 Data Verification

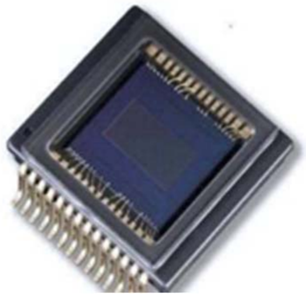


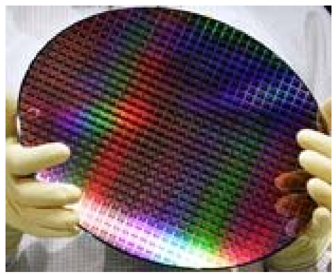
Applications


FPCB inspection

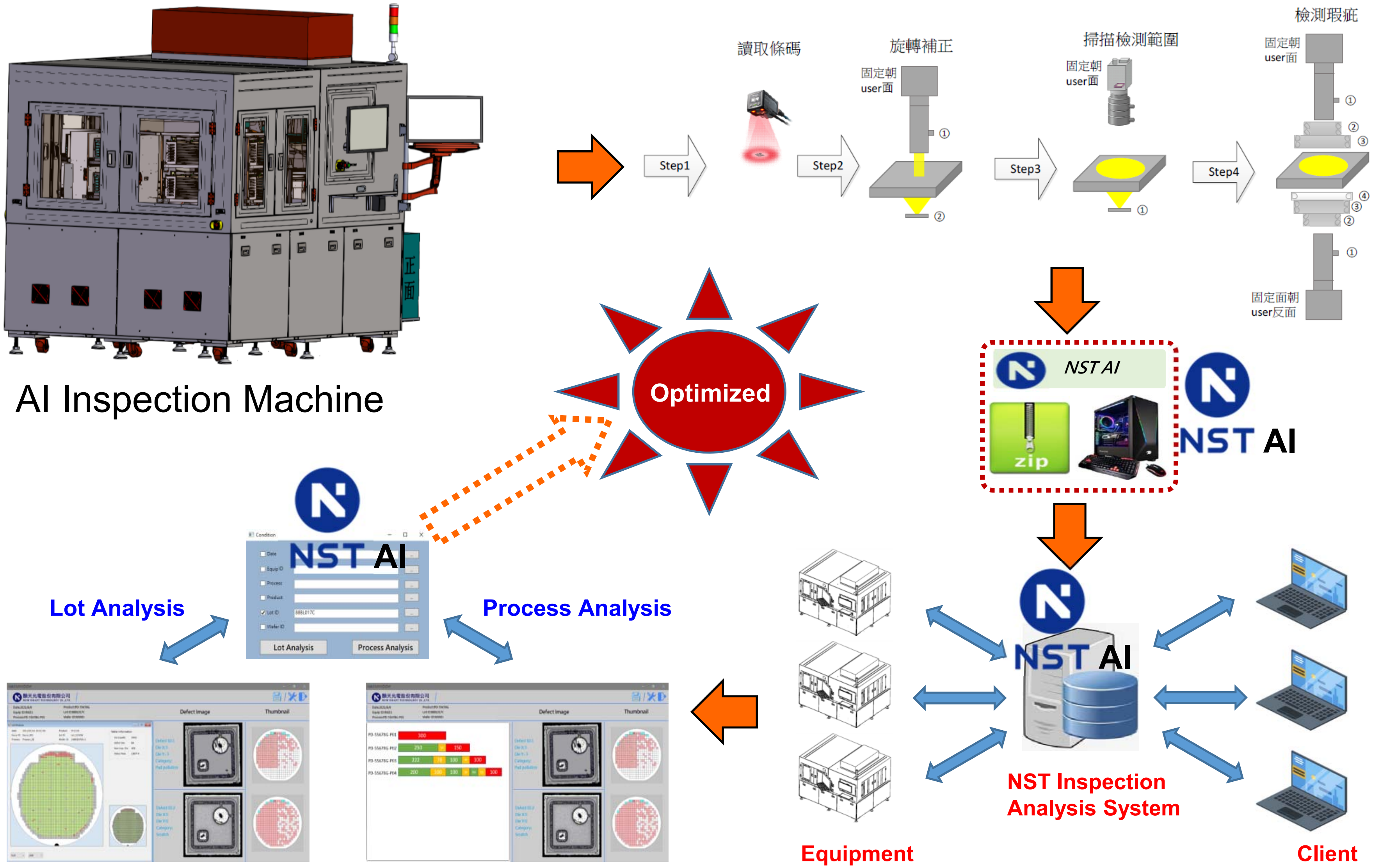

Lens module inspection


VR/AR inspection


Sensor inspection


Wafer inspection

Case Study- AI software tool for efficiency optimized



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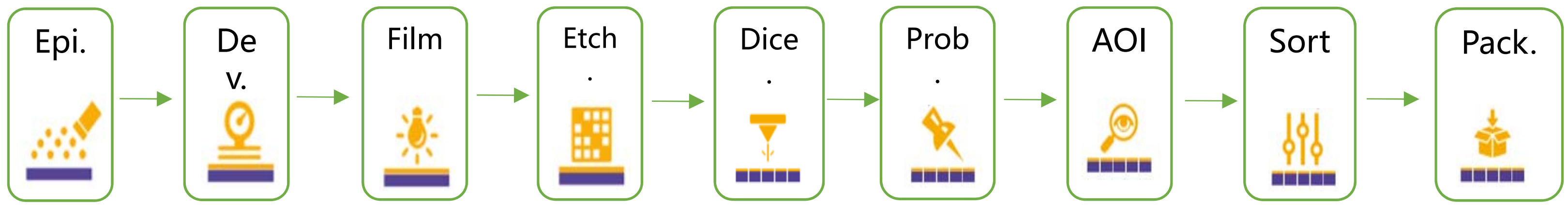
Case Study- AI algorithm for yield improvement

Control → Connect → Collaborate → Visualize → Analyze → Optimize

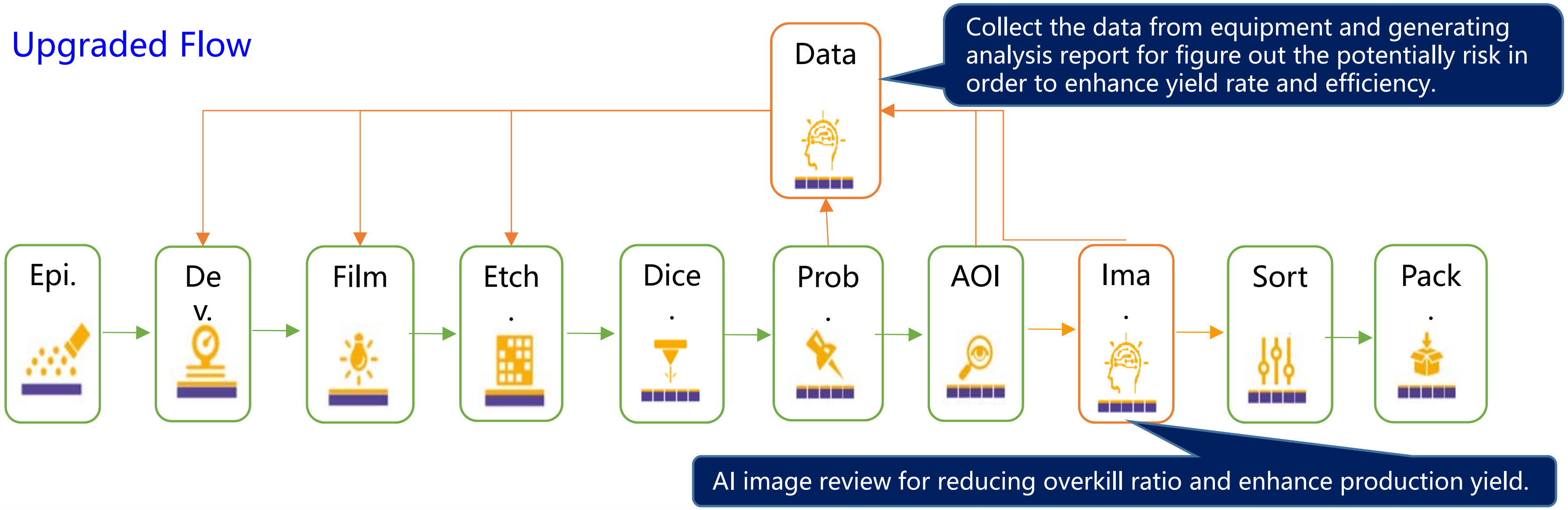
Efficiency Enhanced

Intelligent Manufactory- Collect the data from equipment thru EDC, doing further yield analysis and conduct improvement for enhance efficiency, improve quality and reduce cost.

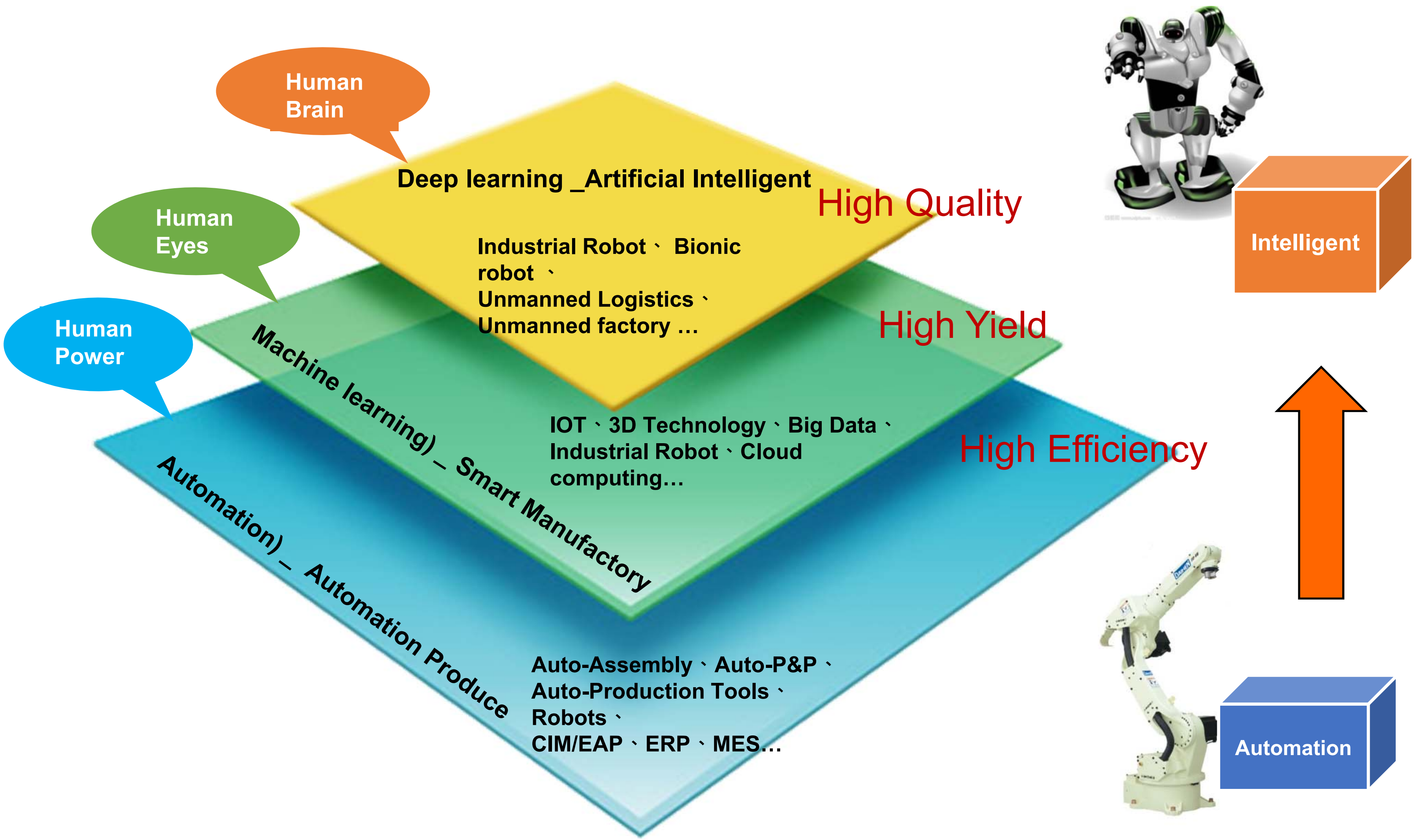
◆ Original Flow



◆ Upgraded Flow



Upgrading from Automation plant to Intelligent Manufactory



The goal to be accomplished by NST

The highest quality requirement by NiChia and Optotech is the target to achieve and produce the best products in the world accordingly.

	Short Term	Middle Term	Long Term
Key items	Whole line 100% AI inspection	Whole line automated production	AI intelligent production line
	AI defect re-check	EAP system integration	AI data analysis
Major approaches	✓ Enhance goods quality by using AI technology to lower the overkill ration. ✓ Lower the man-power ration by fully auto inspection machine.	✓ Further reduction of labor by implementing fully auto production line. ✓ Reduce production cost by integrating various production tools.	✓ Increasing yield rate by analyzing the production date thru AI algorithm. ✓ Results the good performance of factory by calculating the BIG data from machines.

Thank you