



# ememory

**A Leading Logic NVM  
Company**

**March, 2015**

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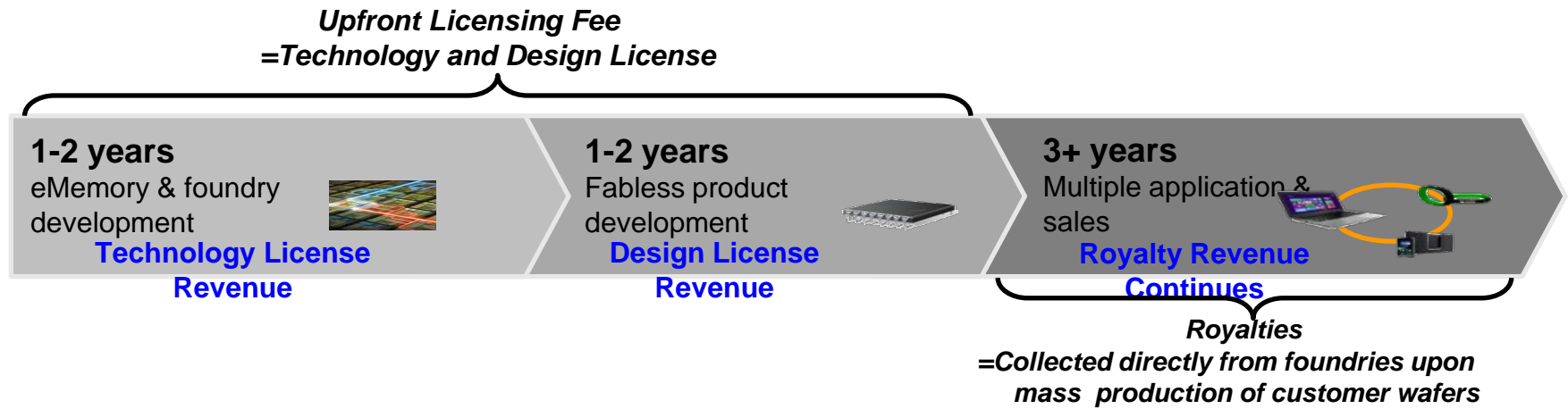
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# Outline

- **Business Model**
- **Review of Operations for 4Q14**
- **Growth Opportunity and Future Outlook**
- **Q & A**

# Business Model

- Founded in 2000. First customer engaged in 2002. Achieved profitability in 2005 and IPO in 2011. The largest logic non-volatile memory IP company, 216 employees (149 R&D).
- Since its IPO, the company initiated no new fund raising or bank debt, and has distributed in excess of 100% of earnings in cash dividends.
- **Growth Indices:** 1) No. of ongoing technology platforms  
2) No. of design licenses  
3) Royalty



# Worldwide Customers



## Foundry



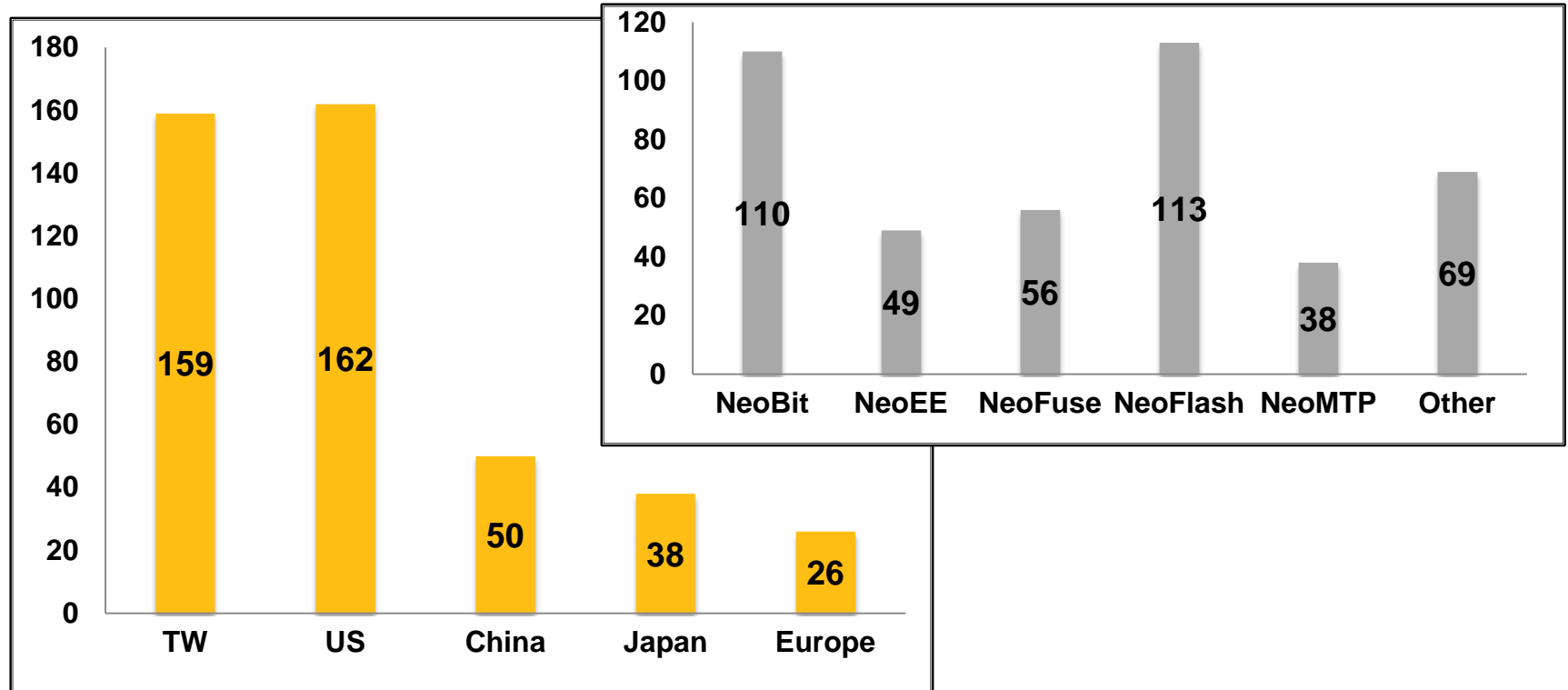
## IDM



	Taiwan	China	Korea	Japan	North America	Europe	Others
Foundry	5	6	3	2	1	0	1
IDM	0	0	0	8	2	1	0
Fabless	226	331	49	31	168	80	31

# Patent Portfolio

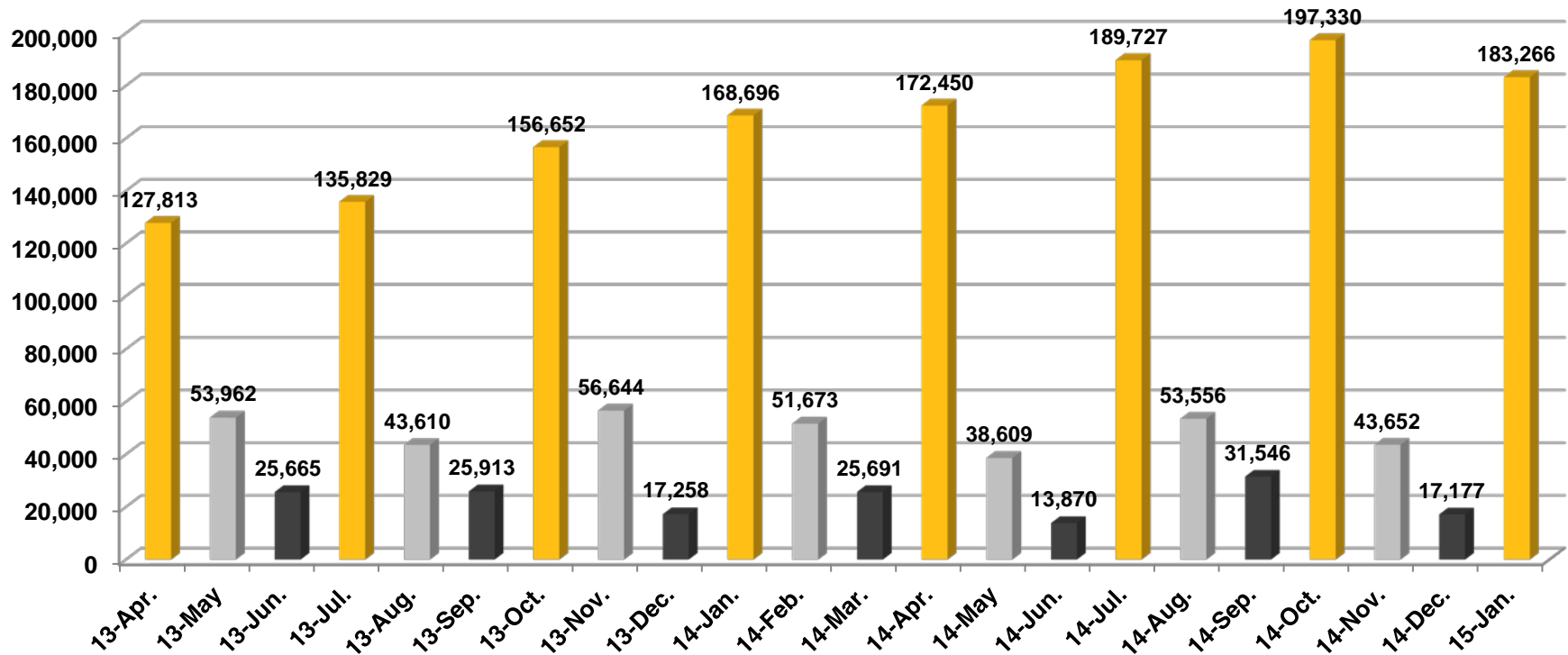
	3Q14	4Q14	Diff.
Pending	160	166	+6
Issued	255	269	+14
Total	415	435	+20



# Quarterly Revenue Pattern

- The quarterly royalty from most of foundries are collected at first month of each quarter and from some other foundries are collected at second month, and none at third month.

Unit : NTD Thousands



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# 4Q Revenue Breakdown

Unit: NTD thousands

	4Q14	3Q14	% change	4Q13	% change	2014	2013	% change
Licensing	51,849	61,981	-16.35%	56,933	-8.93%	246,073	245,688	0.16%
Royalty	206,310	212,848	-3.07%	173,621	18.83%	757,904	562,570	34.72%
Total	258,159	274,829	-6.07%	230,554	11.97%	1,003,977	808,258	24.21%

Unit: Number of contracts

		4Q14	3Q14	2014	2013
Technology Licenses		3	6	21	19
Design Licenses	NRE	15	22	82	51
	Usage	99	88	363	342

# Financial Income Statement

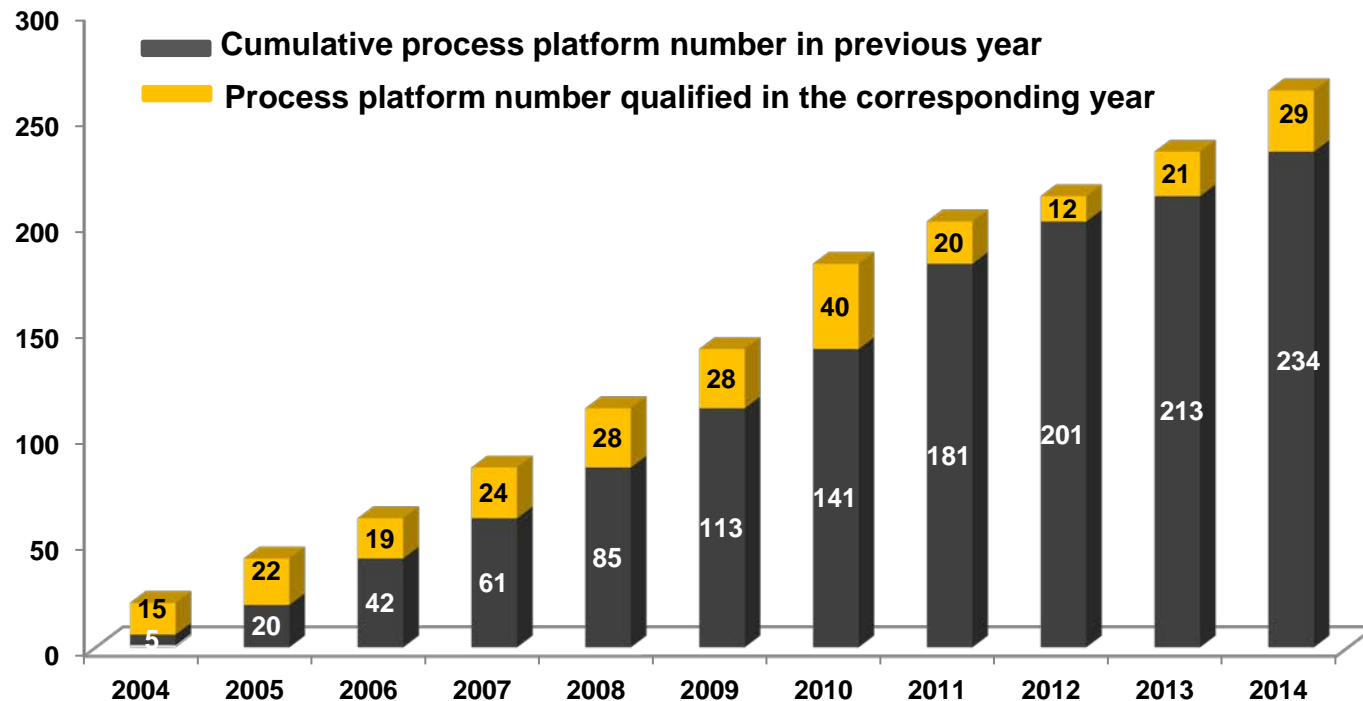
(Unit: NTD thousands)	4Q14	4Q13	% change	2014	2013	% change
Revenue	258,159	230,554	12.0%	1,003,977	808,258	24.2%
Gross Margin	100%	100%	-	100%	100%	-
Operating Expenses	148,501	124,761	19.0%	540,321	468,574	15.3%
Operating Margin	42.5%	45.9%	-3.4ppts	46.2%	42.0%	+4.2ppts
Net Income	100,896	91,268	10.5%	418,569	290,640	44.0%
Net Margin	39.1%	39.6%	-0.5ppts	41.7%	36.0%	+5.7ppts
EPS (Unit: NTD)	1.33	1.21	9.9%	5.52	3.87	42.6%
ROE	23.4%	22.9%	+0.5ppts	24.3%	18.2%	+6.1ppts

# Technology License

Unit: Number of contracts

Year	2012	2013	2014
License number	12	19	21

Note: The terms (including number of process platforms and licensing fees) for each technology license are set contractually. Payments are made according to set milestones, and there are no particular seasonal factors involved.



# Current Technology Development Platforms

- Total (As of Jan.) : **81\***
- **27** for NeoBit, **29** for NeoFuse, **2** for NeoFlash, **15** for NeoEE, and **8** for NeoMTP.

	16nm	28nm	40nm	55/65nm	80/90nm	0.11~ 0.13um	0.15~ 0.18um	>0.25 um	Total
NeoBit	-	-	-	1	-	9	15	2	27
NeoFuse	1	7	4	9	1	5	2	-	29
NeoFlash	-	-	-	1	-	1	-	-	2
NeoEE	-	-	2	-	1	4	7	1	15
NeoMTP	-	-	-	1	2	2	3	-	8

Note\*: 2 platforms qualified in Jan.

# Current Technology Development Platforms

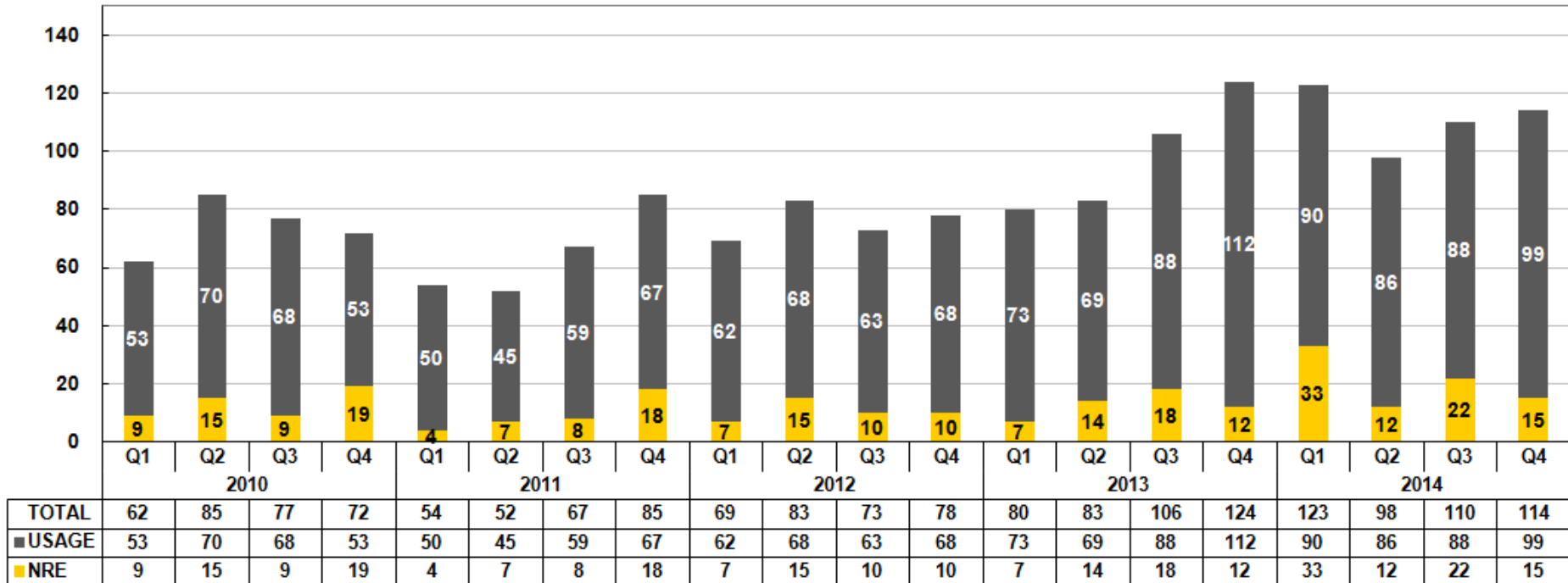
12" Fabs	Production	Development	NVM Type	Process Type
16nm	0	1	OTP	FF+
28nm	2	7	OTP	LP/HPM, HLP/HPM, LPS
40nm	1	6	OTP, MTP	HV-DDI, LP
55/65nm	7	12	OTP, MTP, Flash	LP, HV-DDI, HV-OLED, DRAM, CIS
80/90nm	5	4	OTP, MTP	HV-DDI, HV-OLED, LP
0.13/0.11um	4	5	OTP, Flash	HV-DDI, BCD, Generic
0.18um	1	0	OTP	BCD

8" Fabs	Development	NVM Type	Process Type
0.13/0.11um	16	OTP, MTP, Flash	HV-DDI, BCD, LP, RF, CIS, LL
0.18/0.16/0.152um	27	OTP, MTP	Generic, LP, LL, MR, HV, Green, BCD
0.25um	2	OTP, MTP	BCD
0.35um	1	OTP	UHV

\*As of Jan. 31, 2015

# Quarterly Design Licenses (New Tape-Out)

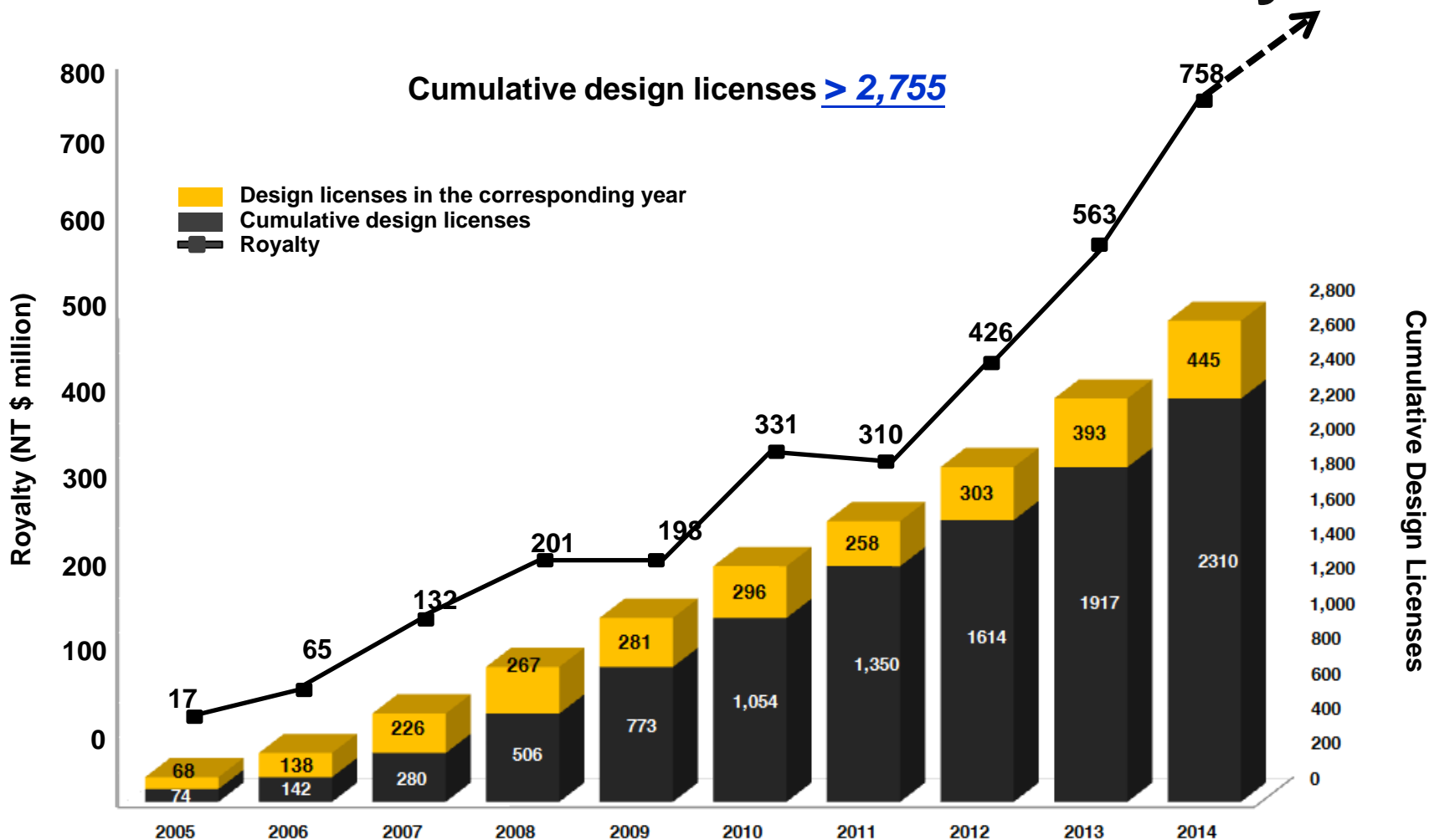
- Total **445** NTO as of 4Q 2014 ( **393**@2013, **303**@2012, **258**@2011)



Usage : Usage of pre-qualified and verified IP (charged by per product tape out or annual package), the cycle time from design implementation to royalty payments for mass production is faster, typically less than one year.

NRE: NRE covers the customization of IP that must undergo new verification or qualification. It typically requires 1 to 1.5 years before resulting in royalty revenue.

# Cumulative Licenses Drive Future Royalties

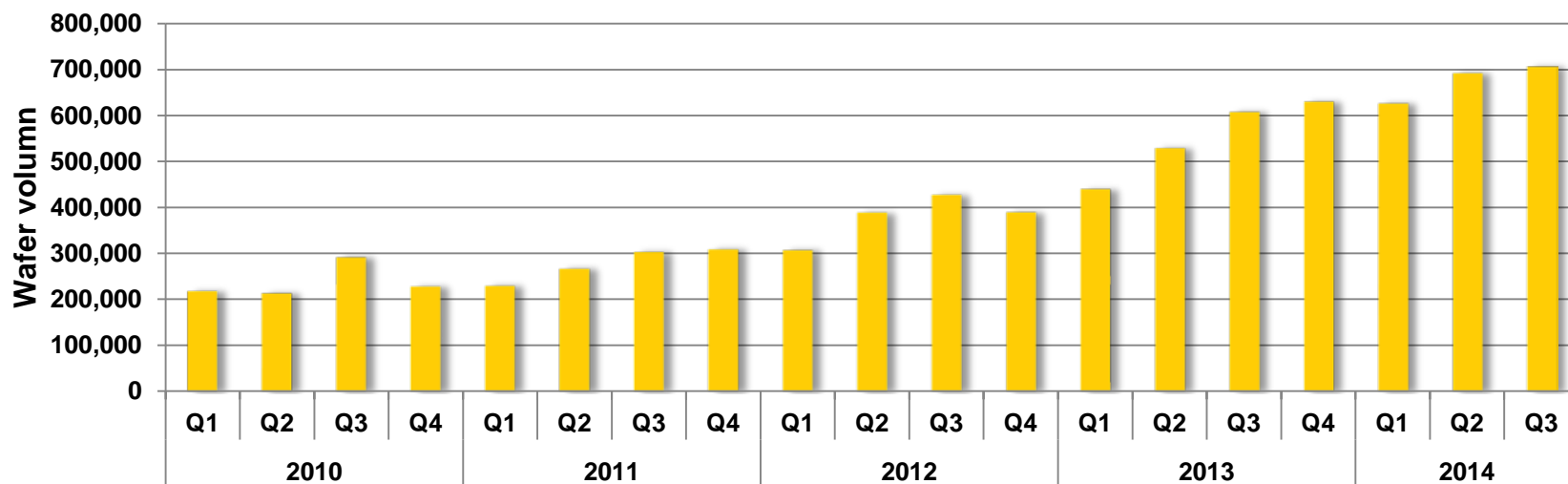


note 1: Due to the 2009 recession, royalty income was down annually 1.5%.

note 2: Pre-payment of royalty fees by a single customer contributed to 2010 annual growth of 67%, causing a drop of 6.3% in the following year, 2011.

note 3: CAGR for 2009-2013 was 30%.

# Wafer Production Volume



embedded eMemory IP in T Company (\$revenue); \* % of Process node in T company total revenue in 4Q14

	Process node	*% of T	4Q14	3Q14	2014	2013
8"	0.5+	1%	0%	0%	0%	0%
	0.25/0.35	4%	30%	33.5%	30.5%	27.3%
	0.15/0.18	12%	8%	13%	11.9%	10.7%
	0.11/0.13	2%	28.9%	21%	20.8%	19.1%
12"	90nm	6%	18.2%	16.4%	16.3%	4.8%
	65nm	11%	0.1%	0%	0%	0%
	40/45nm	13%	0%	0%	0%	0%
	28nm	30%	0%	0%	0%	0%
	20nm	21%	0%	0%	0%	0%
8"		19%	14.2%	17%	15.6%	14.2%
12"		81%	1.4%	1.6%	1.4%	0.69%
Total		100%	4.3%	5.1%	4.5%	4.1%

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# Applications by Technology

12"

8"

# 16/20nm

# 28nm

**40nm**

# 55/65nm

## 80/90nm

# 110/130nm

**160/180nm**

**250nm**

# 350nm

# NeoBit

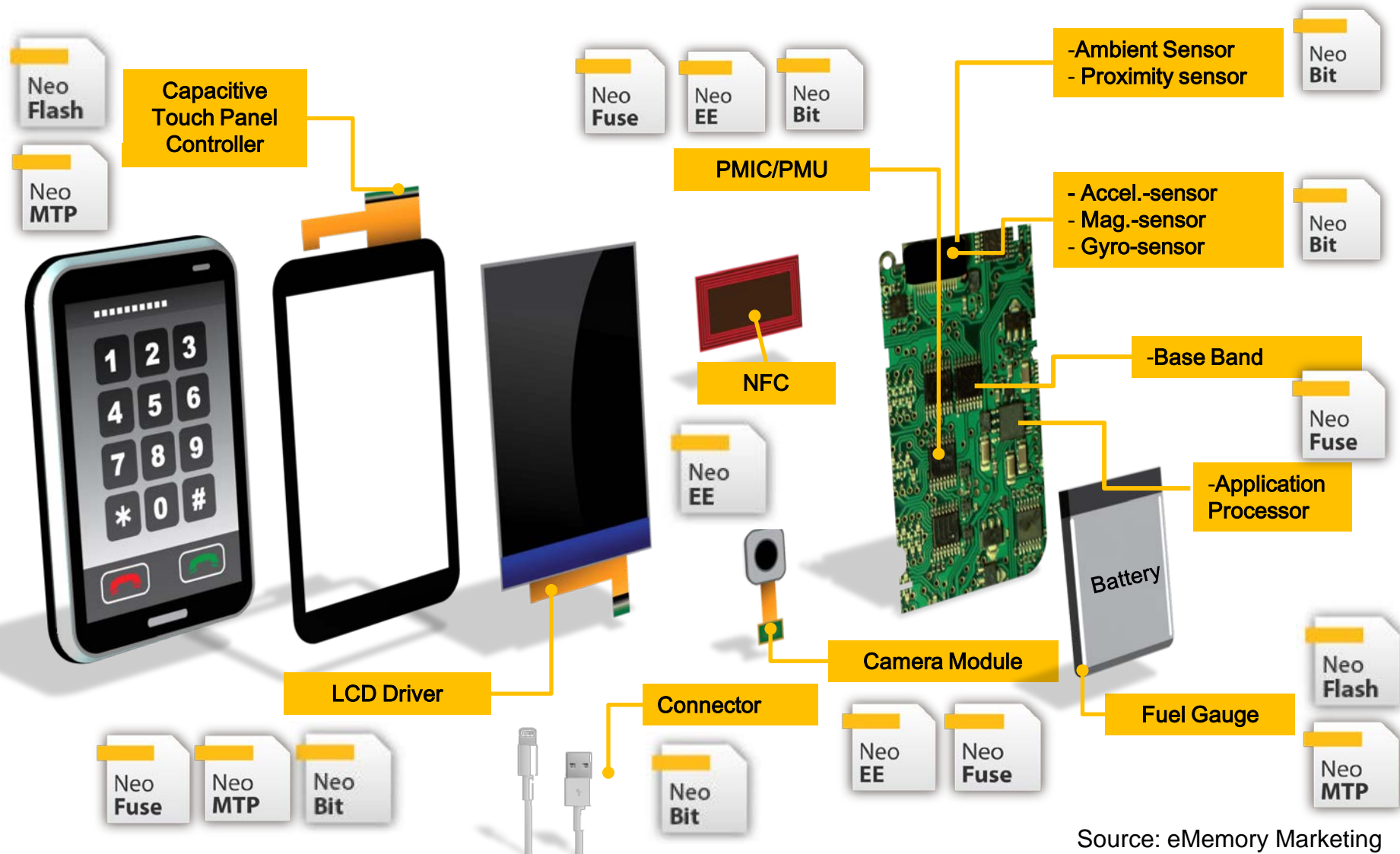
# NeoFuse

# NeoFlash

# NeoEE

# NeoMTP

# eMemory IP in Smartphone



Source: eMemory Marketing

# 2015 Outlook

- Applications in major smart phone customer continue their momentum and expand to wearable devices.
- PMICs in Chinese smart phone continue to increase production and expand to new power management applications , such as fast charger and wireless charger.
- TDDI and 55nm LCD Drivers start to ramp up.
- Applications in STB, Fingerprints, and CIS will ramp up in 2H of 2015.

# Key Growth Drivers

## **Growth in application per mobile devices**

- More chip applications per smartphone/tablet product.

## **Growth into more markets**

- From consumer electronics and mobile devices to wearable devices.
- Adding new NVM product lines further enable more product applications.

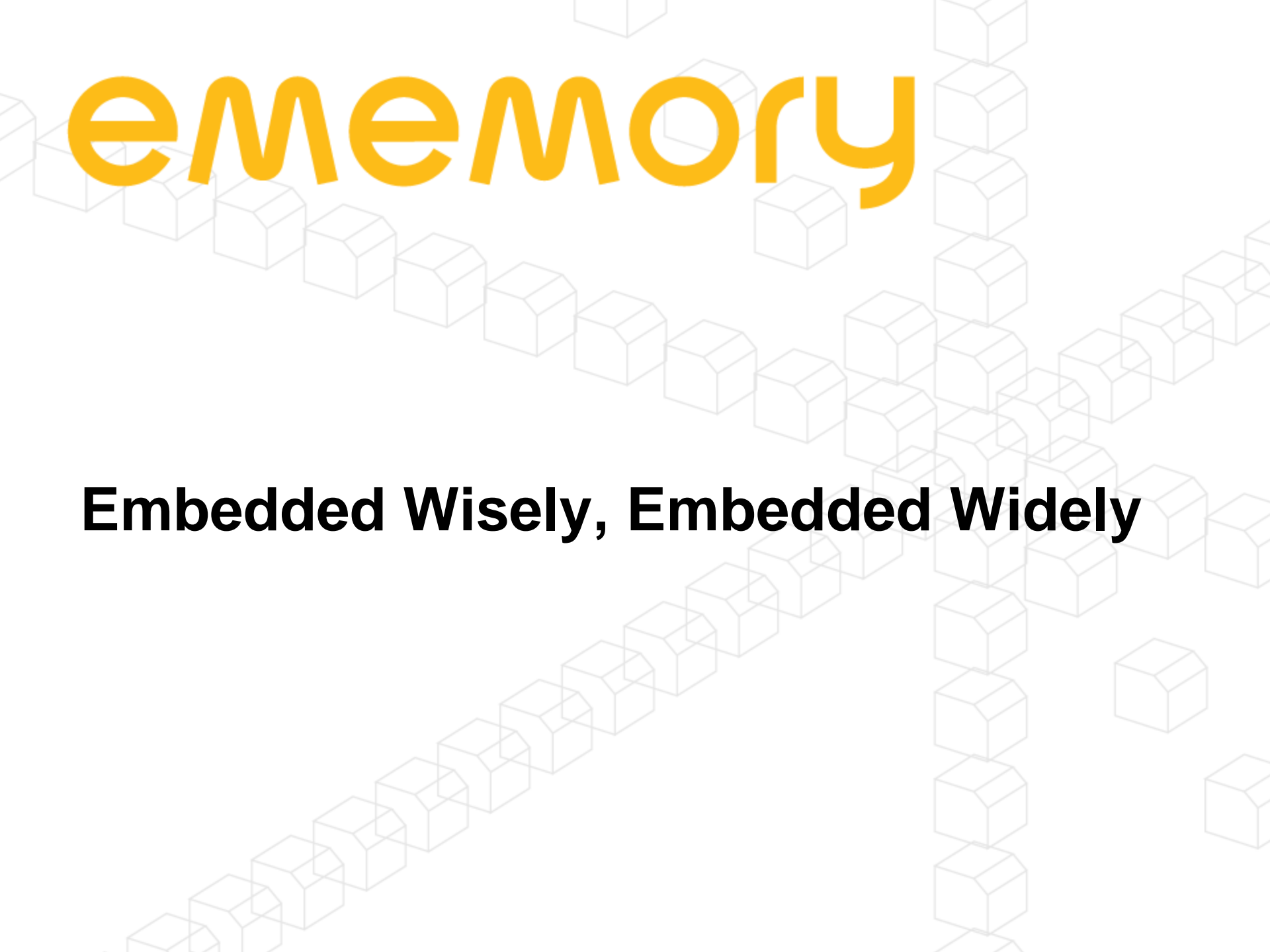
## **Growth in advanced technology**

- Higher royalty per wafer is contributed from more advanced technology nodes.

## **Great IoT era**

- Embedded Logic NVM will be a must.

# Q & A



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**Embedded Wisely, Embedded Widely**