

The image features the EMemory logo in a bold, orange, lowercase sans-serif font at the top. The background is white with a pattern of light gray wireframe cubes. Some cubes are solid, while others are semi-transparent, creating a 3D effect. The cubes are arranged in various orientations and positions, some forming vertical columns and others scattered.

ememory

4Q 2017 Investor Conference

Feb. 12th, 2018

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Outline

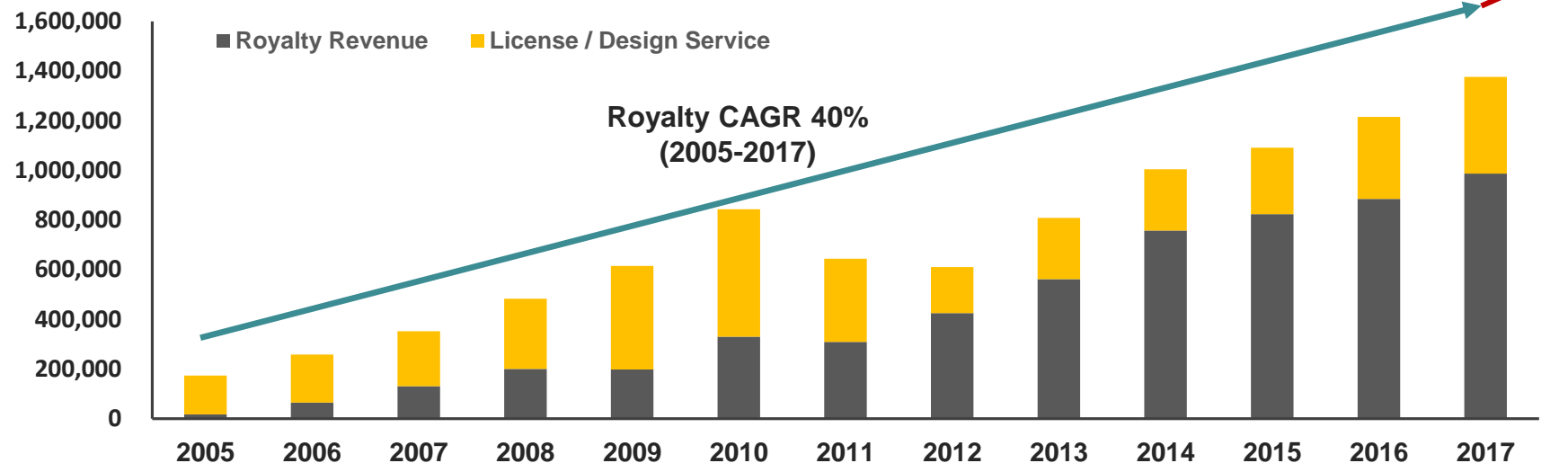
- **Company Overview**
- **Review of Operations for 4Q 2017**
- **Future Outlook**
- **Q & A**

Company Overview

eMemory is the global leader of embedded non-volatile memory IP

(Unit: NT\$ 1,000)

Revenue Trend



Key Facts

- Headquartered in Hsinchu (Taiwan), founded in 2000, IPO in 2011
- 100% gross margins, 43.6% OP margins
- Ranking no. 7 semiconductor IP vendor
- Over 19 mlns of wafers shipped.
- Over 510 patents Issued, another 240 pending
- 238 employees (70% R&D personnel)
- Largest embedded NVM IP vendor
- TSMC Best IP Partner Award since 2010

Worldwide Customers

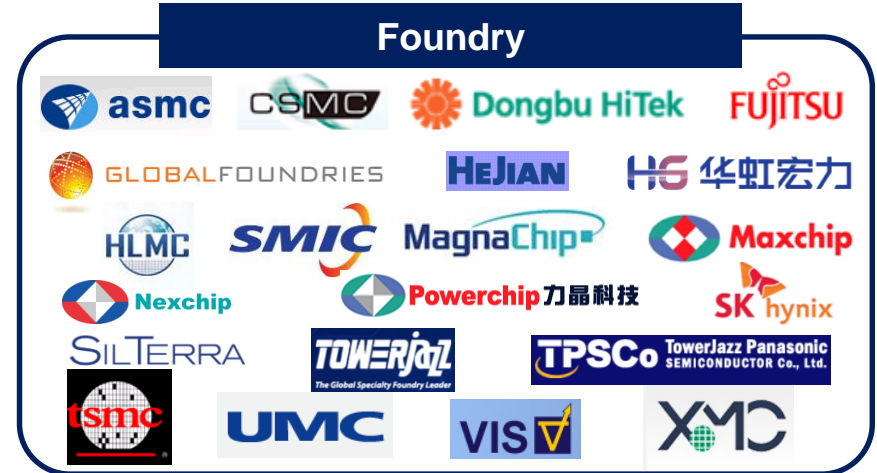
Our IP solutions are adopted by leading foundries, IDMs and fabless worldwide

Global Customers

	Foundry	IDM	Fabless
Taiwan	5	0	261
China	8	0	513
North America	1	2	242
Europe	2	1	111
Korea	3	0	71
Japan	4	8	52
Others	1	0	53



Foundry

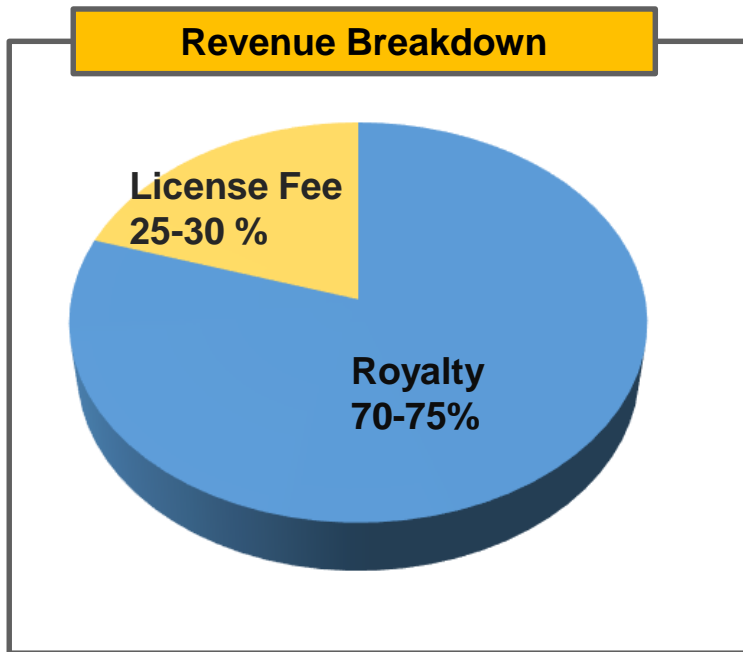
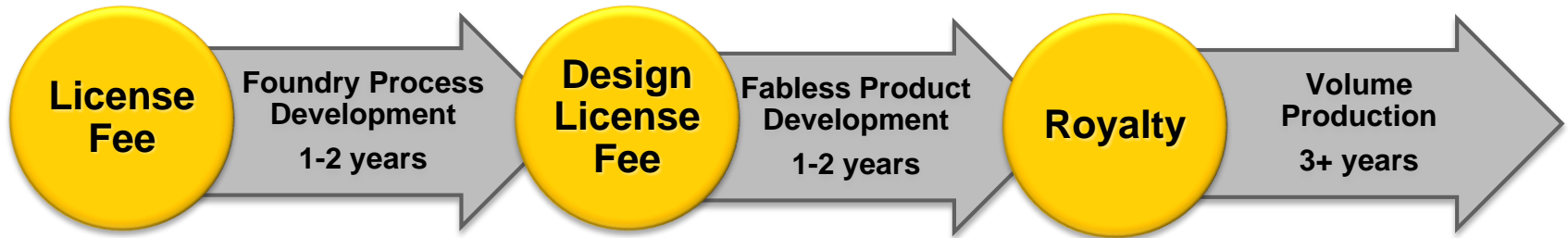


IDM



Business Model

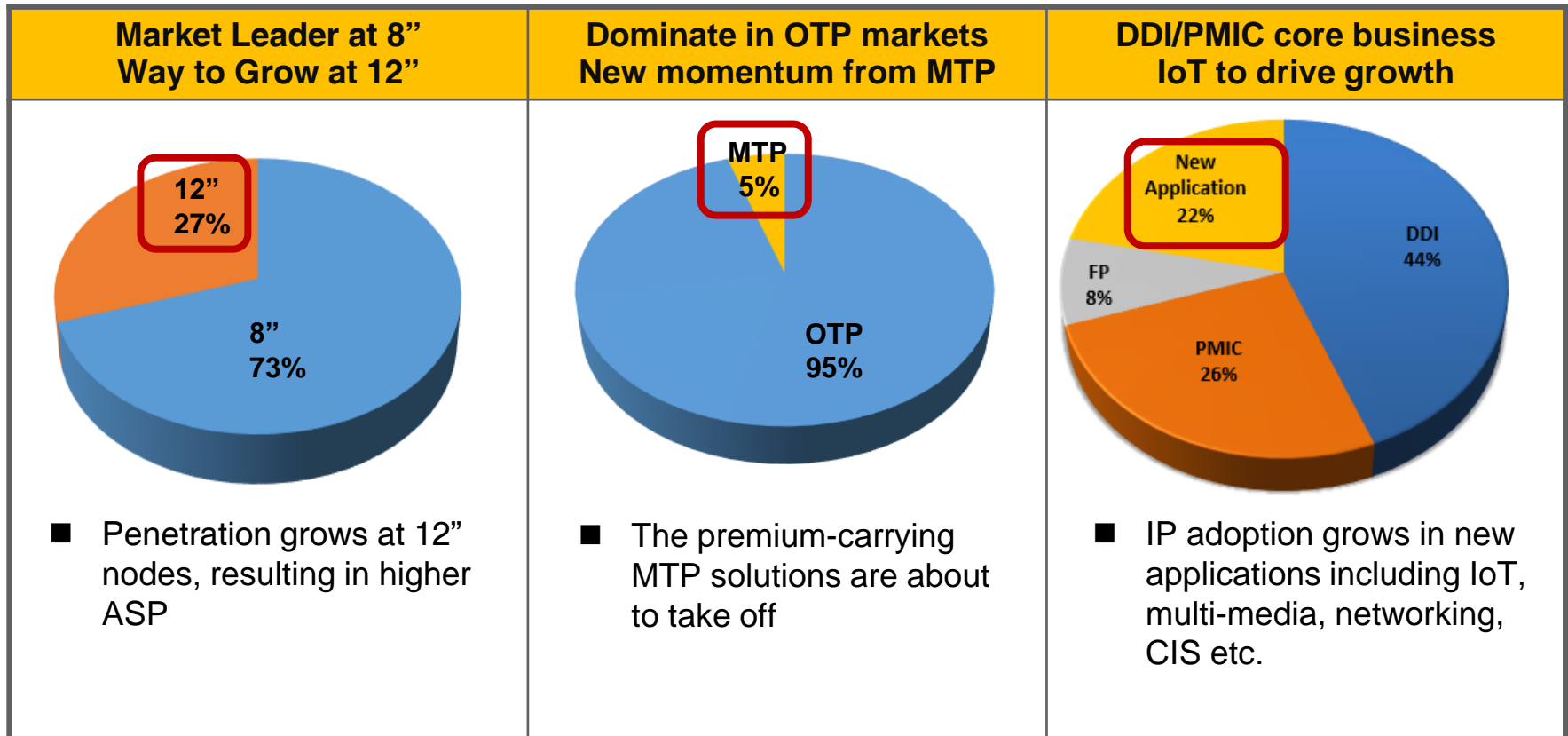
Recurring royalty is the backbone of our business



- 70-75% of revenue is from royalty based on wafer productions
- Royalty rates are based on IP type and wafer
- Royalty revenue is a key growth driver:
 - More adoption = more volume shipment
 - More advanced node wafers = Higher ASP per wafer

Growth Engines

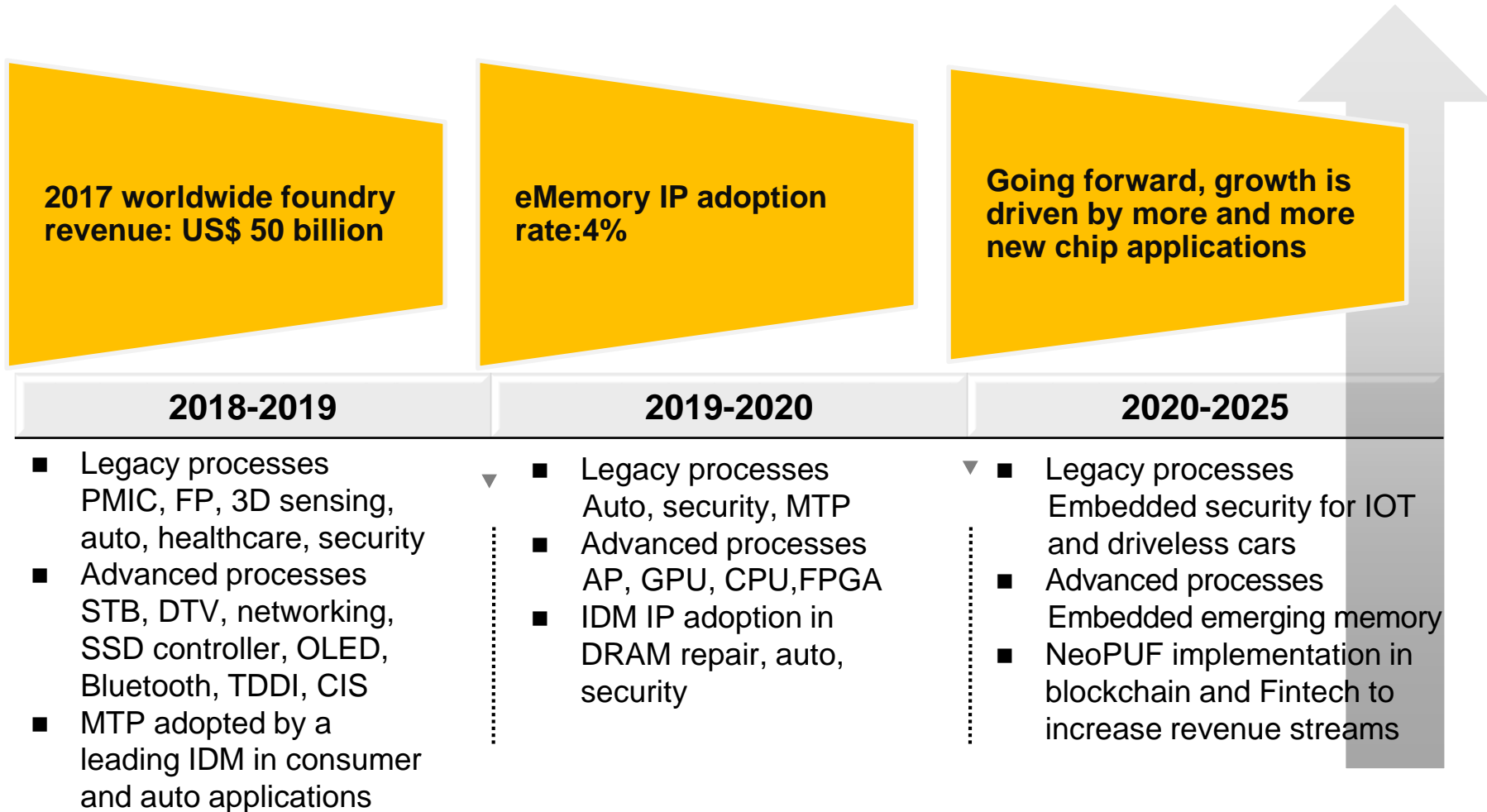
What supports our current growth, What drives our **Future Growth**



As of 2017

Growth Prospects

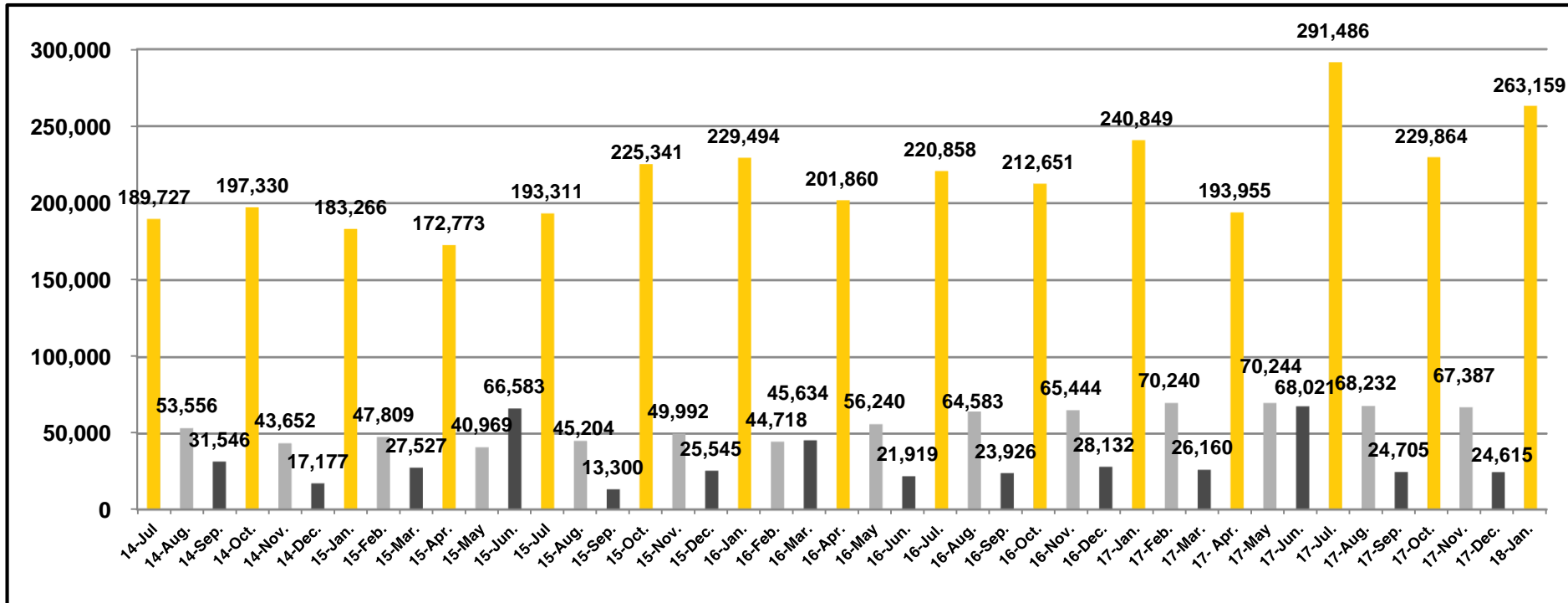
Our near-term, medium-term and long-term growth engines



Quarterly Revenue Pattern

- 1st month: Receive **License Fees** of the month and **Royalty** from most foundries on previous quarter's wafer shipments
- 2nd month: Receive **License Fees** of the month and **Royalty** from other foundries
- 3rd month: **License Fees Only**.

Thousands of NT dollars



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Q4 Revenue Breakdown

Revenue (thousands of NT dollars)

	Q4 2017	Q3 2017	QoQ	Q4 2016	YoY	2017	2016	YoY
Licensing	78,811	101,087	-22.0%	79,684	-1.1%	388,184	330,087	17.6%
Royalty	243,055	283,336	-14.2%	226,543	7.3%	987,574	885,372	11.5%
Total	321,866	384,423	-16.3%	306,227	5.1%	1,375,758	1,215,459	13.2%

Revenue (thousands of US dollars)

	Q4 2017	Q3 2017	QoQ	Q4 2016	YoY	2017	2016	YoY
Licensing	2,620	3,340	-21.6%	2,515	4.2%	12,787	10,256	24.7%
Royalty	8,066	9,341	-13.6%	7,170	12.5%	32,311	27,422	17.8%
Total	10,686	12,681	-15.7%	9,685	10.3%	45,098	37,678	19.7%

Number of Licenses

		Q4 2017	Q3 2017	2017	2016
Technology Licenses		3	4	20	43
Design Licenses	NRE	15	23	55	56
	Usage	78	87	325	311

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Financial Income Statement

Amount in Thousands of NT Dollars, except margins/EPS/ROE

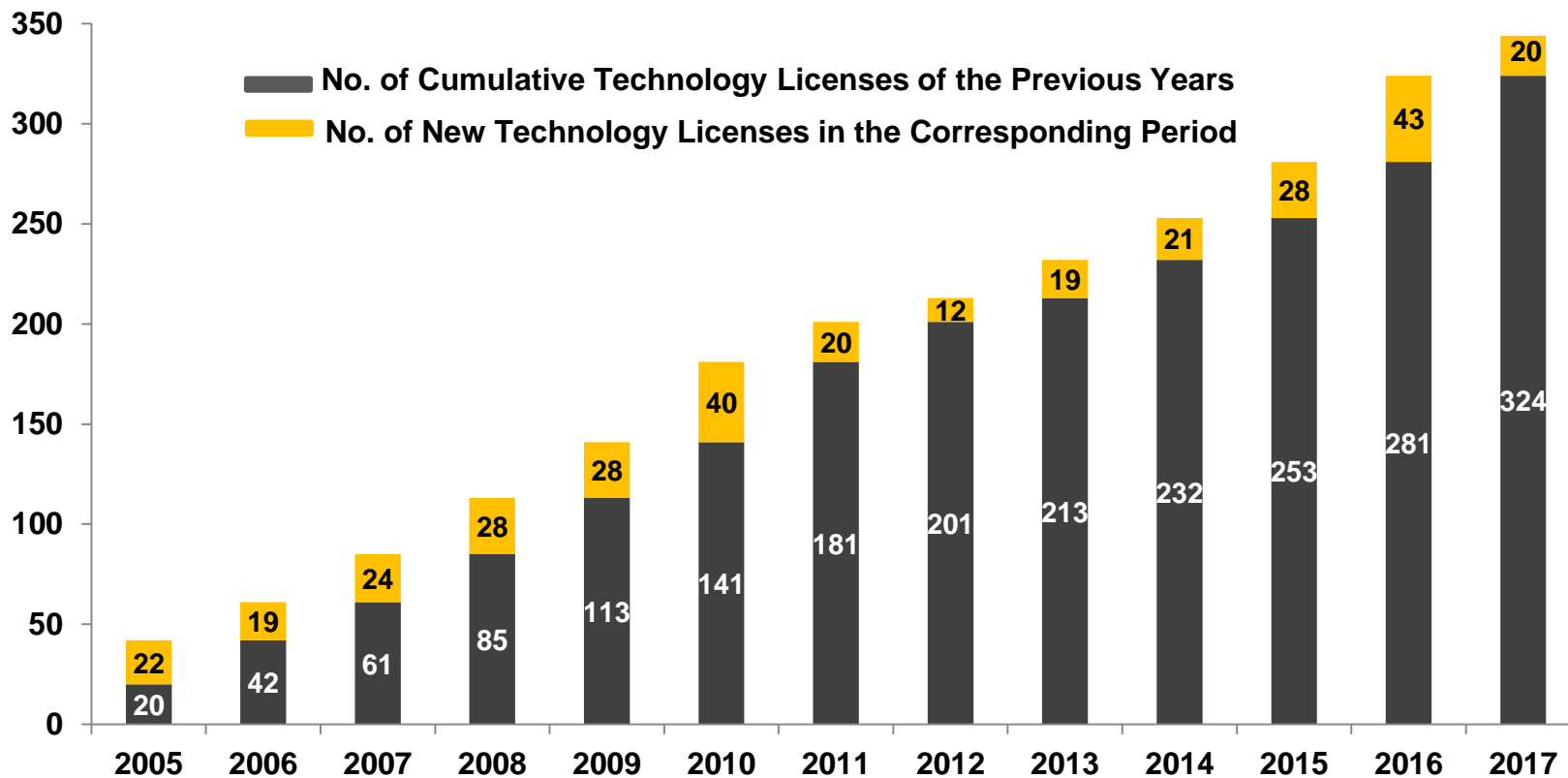
	Q4 2017 (Unaudited)	Q3 2017	change (QoQ)	2017 (Unaudited)	2016	change (YoY)
Revenue	321,866	384,423	-16.3%	1,375,758	1,215,459	13.2%
Gross Margin	100%	100%	-	100%	100%	-
Operating Expenses	185,484	205,291	-9.6%	772,940	685,650	12.7%
Operating Margin	42.4%	46.6%	-4.2ppts	43.8%	43.6%	0.2ppts
Net Income	117,659	194,062	-39.4%	598,709	534,917	11.9%
Net Margin	36.6%	50.5%	-13.9ppts	43.5%	44.0%	-0.5ppts
EPS	1.55	2.56	-39.5%	7.90	7.06	11.9%
ROE	23.6%	40.2%	-16.6ppts	30.0%	28.6%	1.4ppts

Technology Licensing

Number of Licenses

Year	2014	2015	2016	2017
License	21	28	43	20

Note: 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.



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New Technologies Under Development

- New technologies being developed for **106** platforms by Q4 17.
- **18** for NeoBit, **40** for NeoFuse, **3** for NeoPUF, **18** for NeoEE, and **27** for NeoMTP.

	7/10nm	12/14/16nm	28nm	40nm	55/65nm	80/90nm	0.11~ 0.13um	0.15~ 0.18um
NeoBit	-	-	-	-	1	-	7	10
NeoFuse	3	3	10	4	8	7	1	4
NeoPUF	-	-	1	-	2	-	-	-
NeoEE	-	-	-	-	-	-	2	16
NeoMTP	-	-	-	1	2	2	7	15

As of Dec. 31st, 2017

Technology Developments by Processes

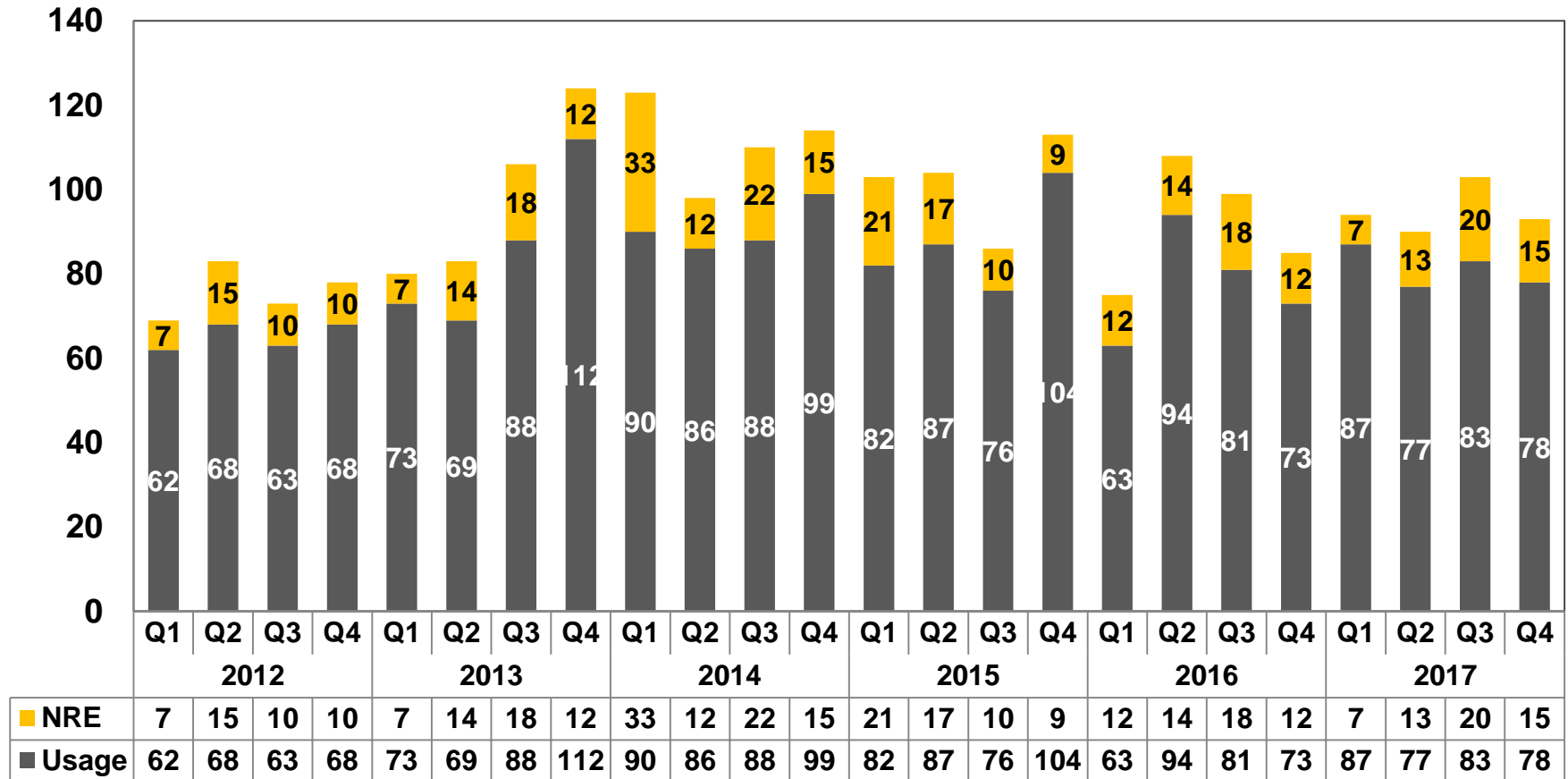
12" Fabs	Production	Development	NVM Type	Process Type
7/10nm	0	3	OTP	FF
14/16nm	2	3	OTP	FF+
28nm	10	11	OTP	LP/HPM, HLP/HPM, LPS
40nm	10	5	OTP, MTP	HV-DDI, LP, eFlash
55/65nm	15	13	OTP, MTP	LP, HV-DDI, HV-OLED, DRAM, CIS, eFlash
80/90nm	7	6	OTP, MTP	HV-DDI, HV-OLED, LP, eFlash
0.13/0.11um	9	2	OTP	HV-DDI, BCD, Generic
0.18um	1	0	OTP	BCD
Total	54	43		

8" Fabs	Development	NVM Type	Process Type
90nm	3	OTP	HV-DDI, LL
0.13/0.11um	15	OTP, MTP	HV-DDI, BCD, LP, RF, CIS, LL, Green
0.18/0.16/0.152um	45	OTP, MTP	Generic, LP, LL, MR, HV, Green, BCD
0.25um	0	OTP, MTP	BCD
0.35um	0	OTP	UHV
Total	63		

Note: As of Dec. 31st, 2017

Design Licensing (New Tape-Out)

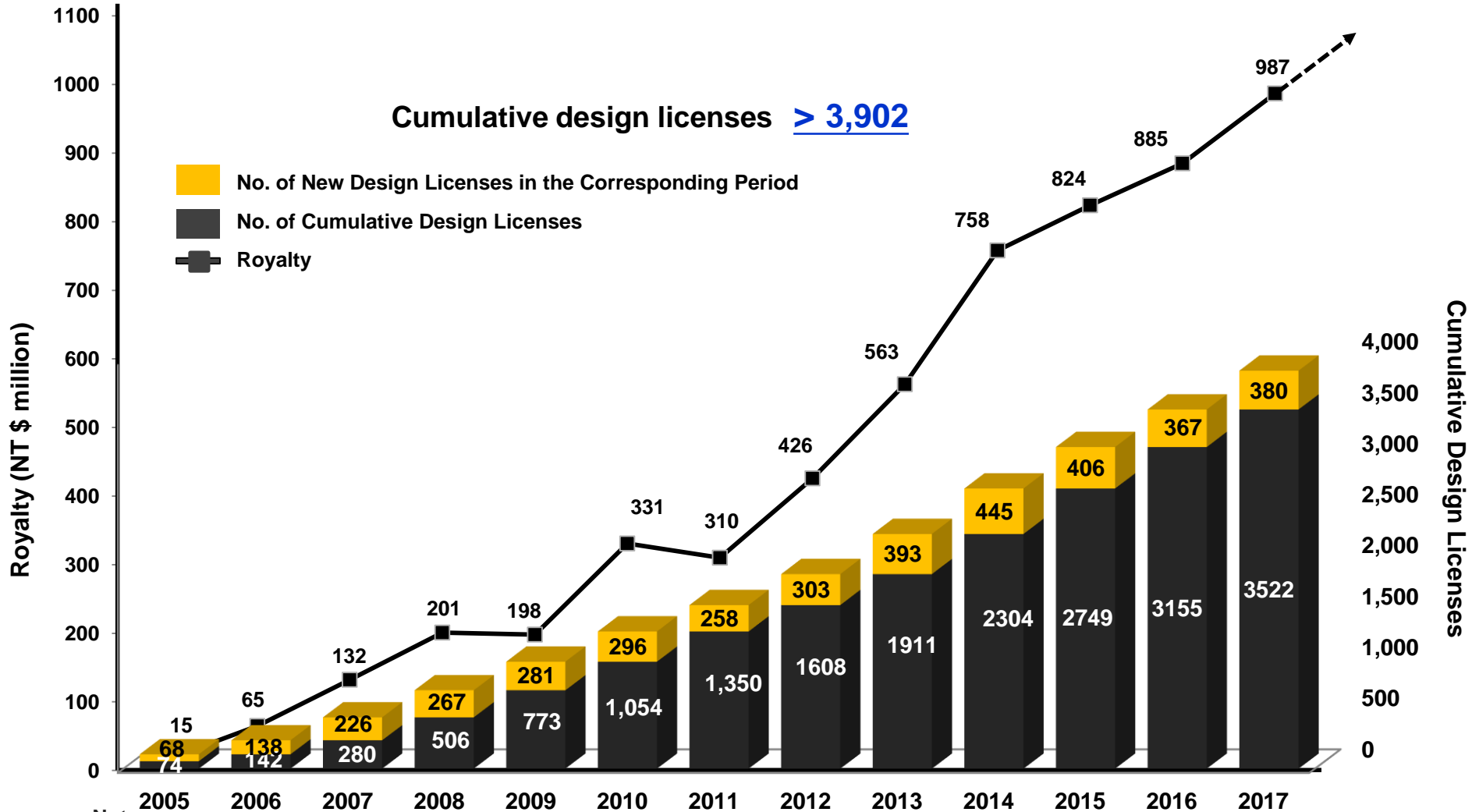
- A total **380** NTO in 2017 (**367**@2016, **406**@2015, **445**@2014, **393**@2013)



Note*: As the applications of MCU at several foundries have gradually entered mass production, and the business model of the main foundry partner which provides green process has shifted to — eMemory licenses IP cell to the foundry for it to provide direct design service to customers - as the result, the new tape out number of MCU has been affected, but the royalty coming from IP cell usage continues to roll in.

In summary, even the new tape out number of MCU is lower than before; the corresponding wafer output and royalty continue to grow.

Cumulative Licenses Drive Future Royalties



Note

- 1: Due to the 2009 recession, royalty income was down 1.5% from the previous year.
- 2: Prepaid royalty from a single customer contributed to 2010 annual growth of 67%, followed by a drop of 6.3% in 2011.
- 3: CAGR for 2009-2013 was 30%.

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Outlook for 2018

- **Key drivers to licensing revenue:**

- › **Establishing partnerships with more foundries worldwide on various process nodes. We have extended our technology cooperation with the largest Korea foundry this year.**
- › **Our growing IP library will boost design license revenue.**

- **Key drivers to royalty revenue :**

- 8-inch processes**

- › **Royalty from PMIC royalty will grow due to the change of business terms with US largest chipmaker from one-time fee to royalty-based, and expected to mass production this year. And, the US second largest IC Design Company has embedded our IP into its wireless charger and will contribute royalty growth in the future.**

Outlook for 2018

- **MTP has been adopted by a European IDM and ready for production.**
- **We continue to expand our market share in Fingerprint application by new customers and new applications**

12-inch processes

- **The trend continues for DDI migrating to TDDI and OLED and will benefit ASP increase.**
- **There are more tape-outs at 28nm for STB, Multimedia, SSD controllers , high performance interface and Network-related applications. Major Asia design houses have adopted our IP into their 28nm products and will contribute to our royalty in 2018 and beyond.**
- **Successfully designed into DRAM IDM for memory repair function and will contribute to royalty growth in the future.**

Outlook for 2018

- **R&D developments**

- › **We continue to develop 7/12/14nm and 22nm SOI with major foundries.**
- › **We have started emerging memory development with a major US IDM.**
- › **NeoPUF has one customer taped out and is adopting into more applications including payment and security related.**

Q & A



eMemory

Embedded Wisely, Embedded Widely