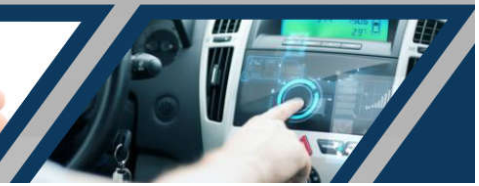
Investor Presentation

April 2018



RUDOLPH TECHNOLOGIES

Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the “Act”) which include the benefit to customers of Rudolph’s products and customer service, business momentum and future growth, Rudolph’s ability to successfully innovate and develop new technologies and product, Rudolph’s expectations about our financial performance as well as other matters that are not purely historical data. Rudolph wishes to take advantage of the “safe harbor” provided for by the Act and cautions that actual results may differ materially from those projected as a result of various factors, including risks and uncertainties, many of which are beyond Rudolph’s control. Such factors include, but are not limited to, Rudolph’s ability to develop, deliver and support a broad range of products, expand its markets and develop new market, the strength/weakness of the back-end and/or front-end semiconductor market segments and fluctuations in customer capital spending. Additional information and considerations regarding the risks faced by Rudolph are available in Rudolph’s Form 10-K report for the year ended December 31, 2017 and other filings with the Securities and Exchange Commission. As the forward-looking statements are based on Rudolph’s current expectations, the company cannot guarantee any related future results, levels of activity, performance or achievements. Rudolph does not assume any obligation to update the forward-looking information contained in this presentation.

Corporate Profile

***Business**:* Provider of Semiconductor Capital Equipment and Software.

***Customers**:* High-volume semiconductor wafer fabs, foundries, and packaging.

(Samsung, SK Hynix, TSMC, Intel, ASE, SPIL, SMIC, Qorvo, RF360, Bosch)

Company NYSE	Revenue (FY 2017)	Operating Income* (FY 2017)	Cash Balance (Dec 2017)	Employees (Worldwide)
RTEC	**$255 million +10% YoY**	**$56 million +20% YoY**	**$177 million**	**~600**

* Non GAAP

On pace for FOURTH consecutive year of record revenue!

Rudolph Technologies Corporate Strategy

Process Solutions

to High Value Problems

in High Growth Markets

Process Solutions Across the Semiconductor Industry

Integrated technology solving high value problems

INSPECT
Macro Defects Silicon to Die
Interconnect Metrology
(3D/2D)

MEASURE
Metal Stacks 1x Node to Packaging
Transparent Films

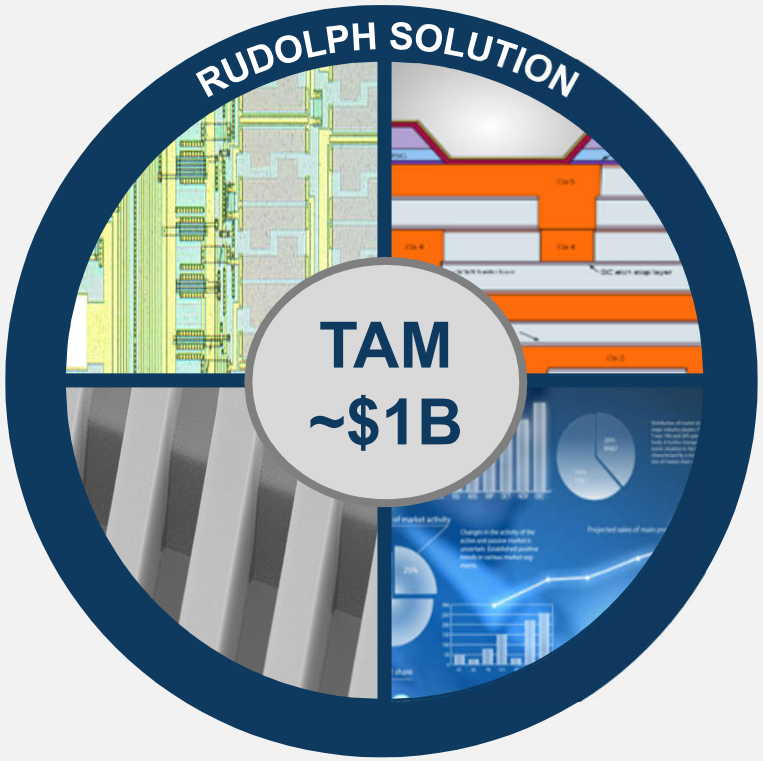


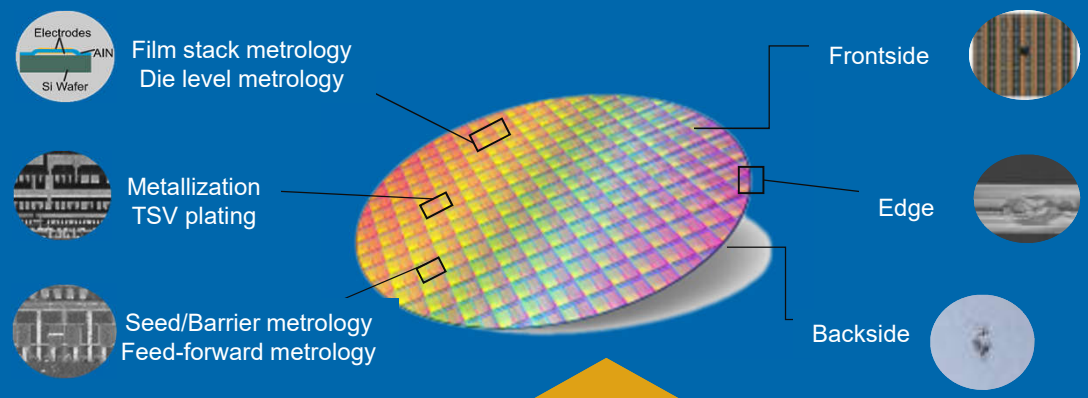
IMAGE
Advanced Packaging Lithography
Fan-out
Cu Pillar
Panel

ANALYZE
Embedded and Factory Wide
Process Analysis
Process Control

Technology From Wafer to Package/Panel

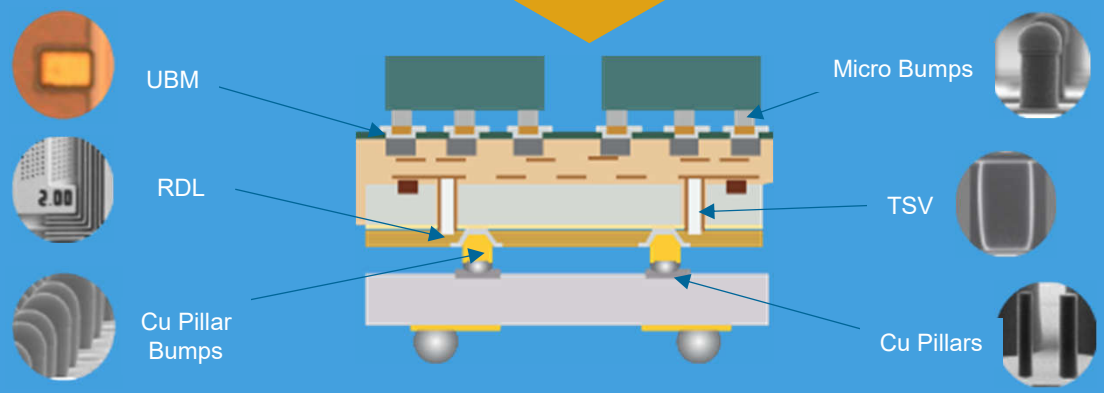
Solving critical Process Control challenges

Front-end
Wafer Characterization



Optimized Yield Across the Value Chain

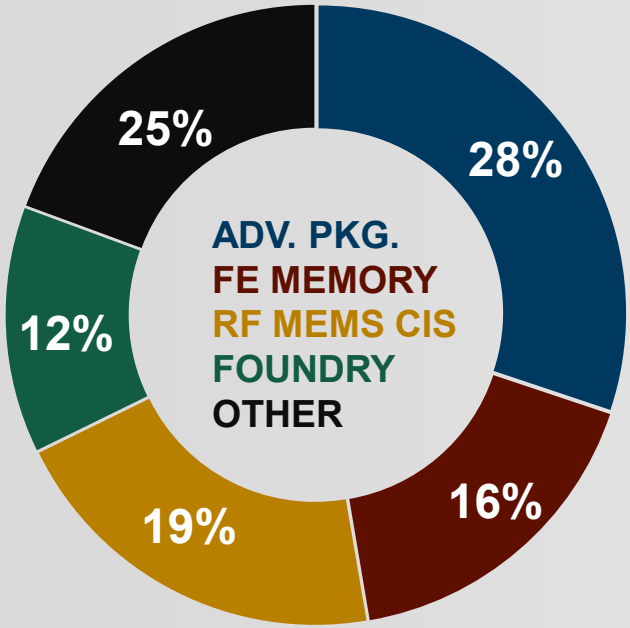
Back-end
Die Interconnects



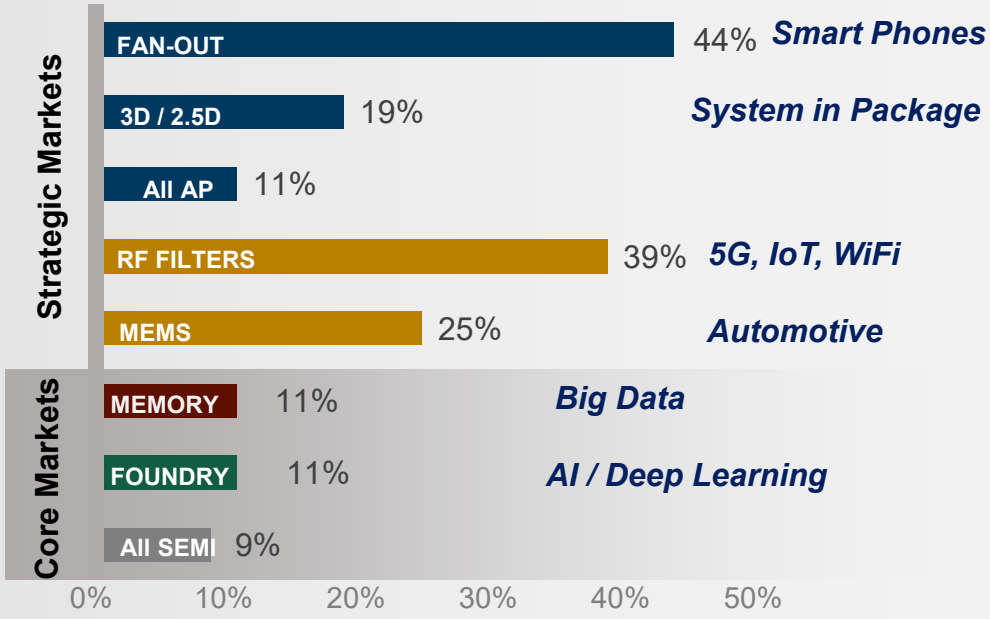
Targeted Market Opportunities & Growth

Diverse targeted markets with forecasted growth

2017 Revenue by Market



2017-2022 UNIT CAGR%

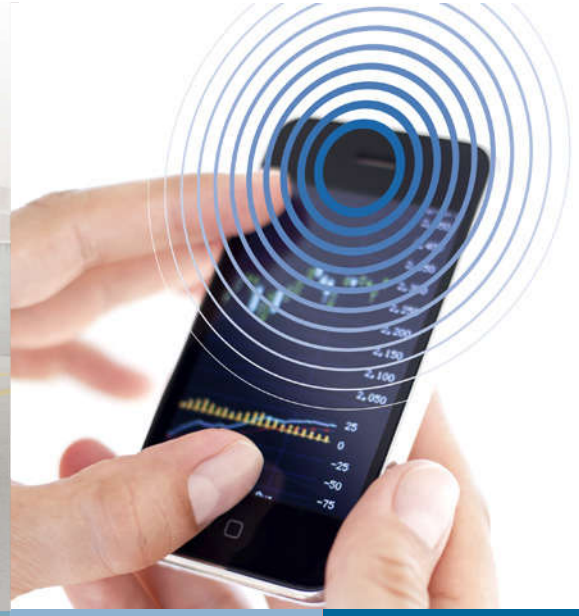


Source: Gartner, Tech Search

Focus on high growth markets tied to diverse end products.

iPhone 2007

iPhone 8 2017



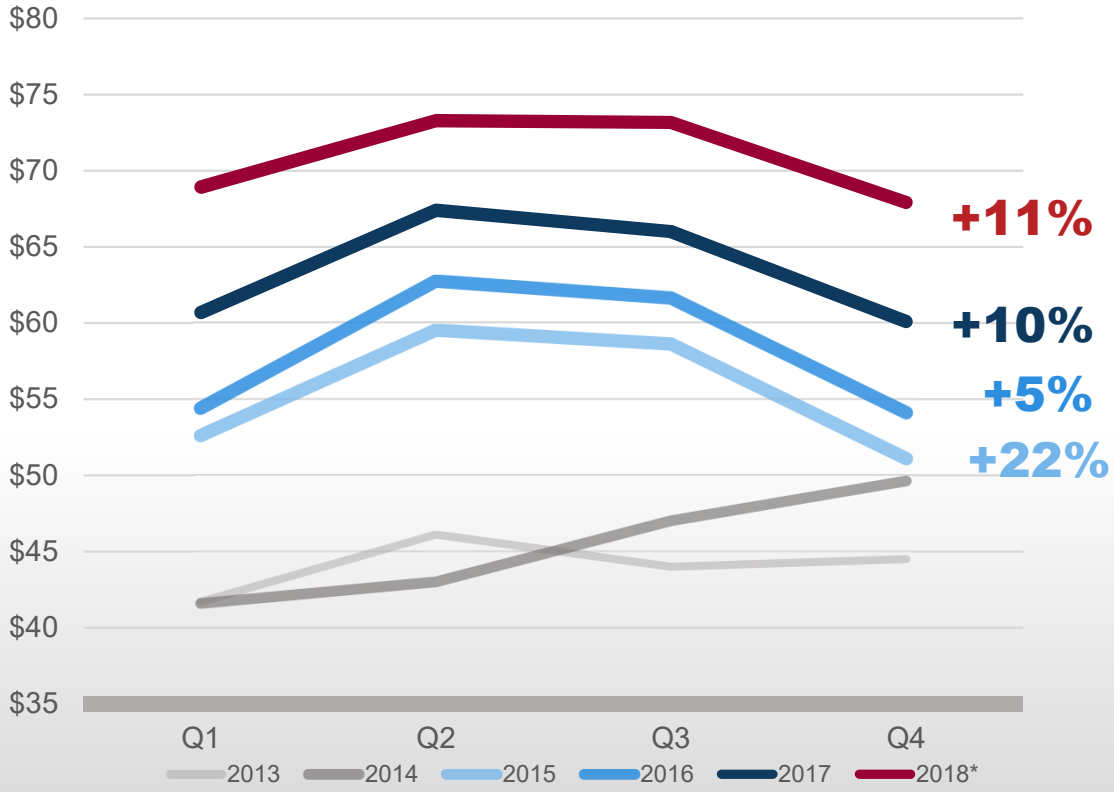
2007	2017	2007	2017	2007	2017
2 Wafer-level packages	**50** Wafer-level packages	**20** Sensors	**80** Sensors	**4** Bands	**45** Bands
44% FO-WLP Unit CAGR (2017-2022)		**25%** MEMS Unit CAGR (2017-2022)		**39%** RF Unit CAGR (2017-2022)	
Form Factor **ADVANCED PACKAGING**		**Sensing Environment** **MEMS**		**Connectivity** **RF**	

RUDOLPH TECHNOLOGIES

Source: Yole Developpment, 2017

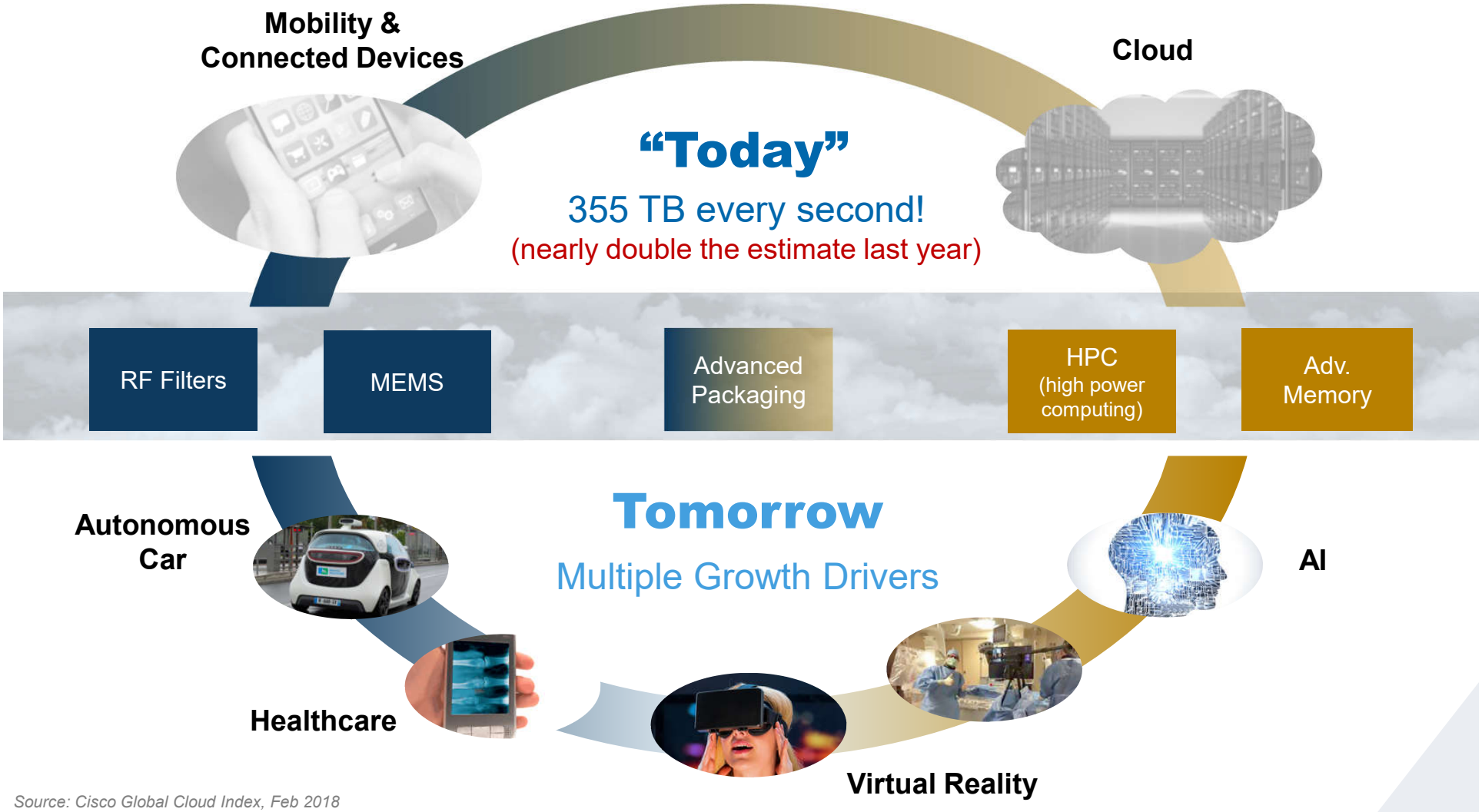
Rudolph Growth Tied to Data/Connectivity Volume

Year over Year Revenue by Quarter



*2018 Data: Analysts' Consensus

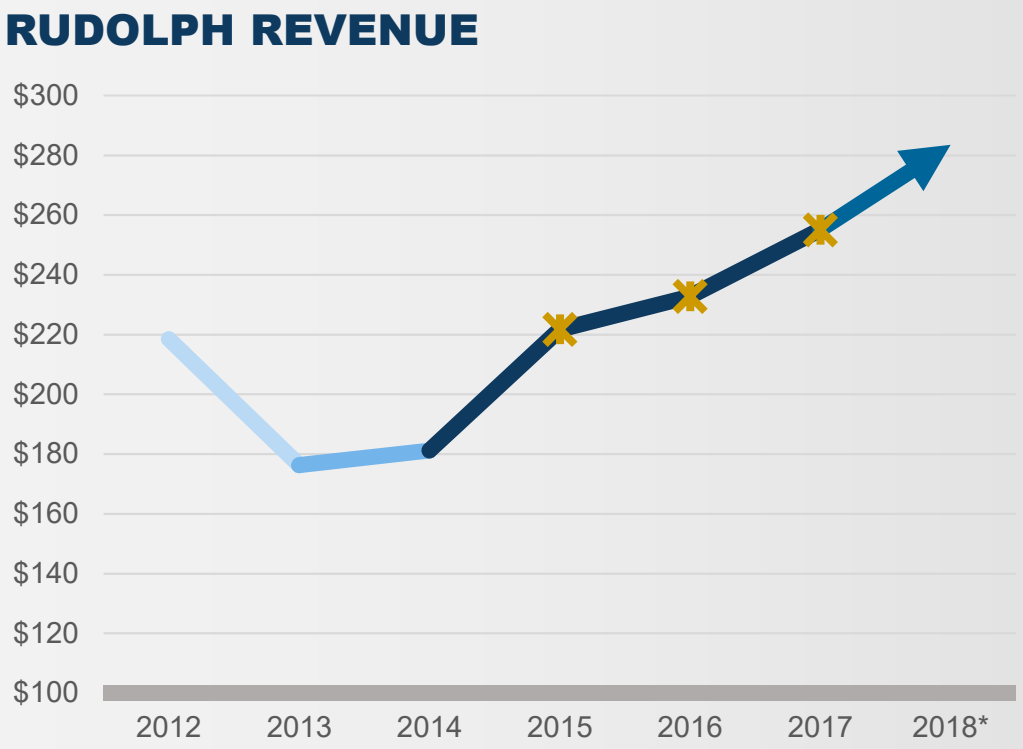
Growth Drivers: Data Generation, Transmission, Processing, Storing



Source: Cisco Global Cloud Index, Feb 2018

Sustainable Results

On pace for a fourth consecutive record year!



Rudolph CAGR 2014-2018*

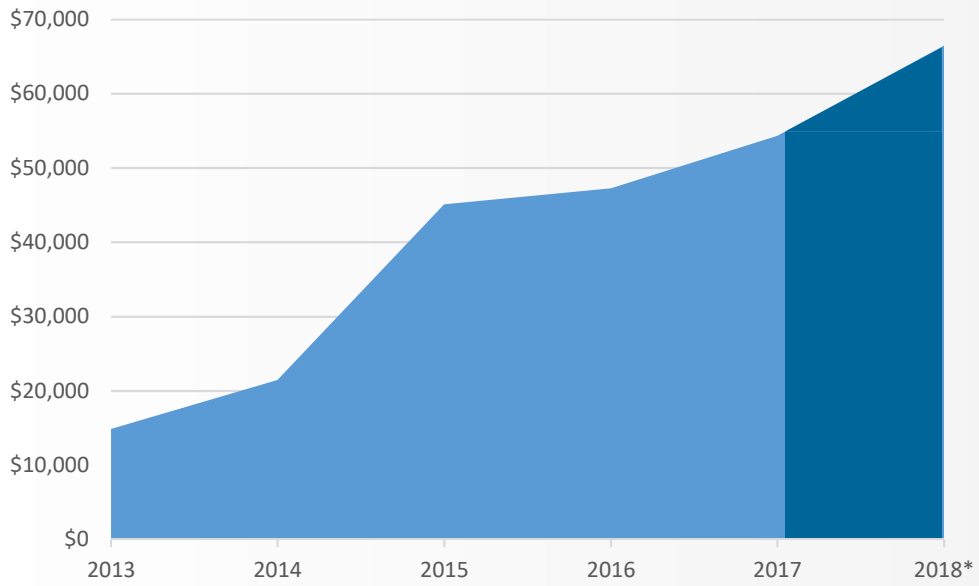
12%

* Analysts' Consensus for FY 2018

Sustainable Results

Driving profitability to fuel growth!

OPERATING INCOME (NON GAAP)



NET INCOME

35% CAGR

with 12% Revenue CAGR

* Analysts' Mean Estimate

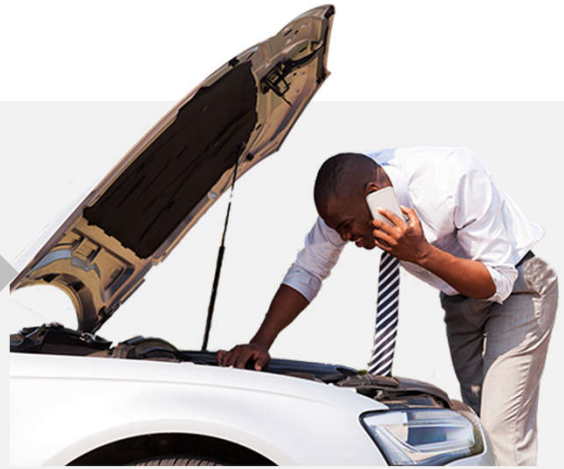
More Improvements Ahead!

Growth Drivers: Higher Quality and Reliability

Semiconductor content is expanding…

A defect rate of
1 part per million

1 car in 1,000
would fail in 2020!



High cost of failure & Brand Reputation

Rudolph Solutions Reduce Device Failures

Growth Drivers: Increasing the Pace of Innovation to Meet Customer Challenges

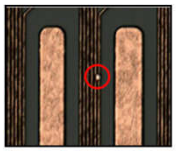
Dragonfly™ 2D Inspection
High speed
High sensitivity

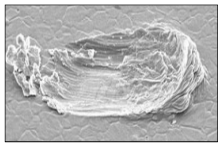
Firefly™ Clearfind™ Technology
Organic contamination
Sub-micron inspection

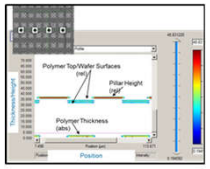
2017 Q2 Q3 Q4 Q1

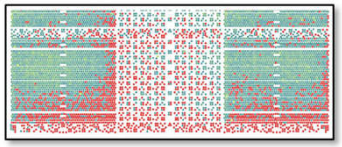
3D Truebump™ Technology
Accurate bump height
High throughput

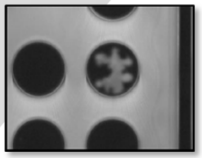
Post-saw
Integrated SAW control
Yield improvement

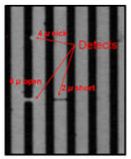

Bridging Defects


Probe Mark Metrology


3D Metrology


Bump Coplanarity


Via Residue


RDL Shorts

Driving Margin Expansion

Consistent Industry Leading Margins

GM	**New products**	Firefly and Dragonfly
	Product outsourcing	Core competencies
	Cost reductions	>$6 million
R&D	**New products cadence**	18% of 2017 Revenue
	Operating efficiencies	Leverage programs
SG&A	**Facilities consolidation**	4 in year last 3 years
	ERP implementation	2018 initiatives

Today
22%
TTM

Operating Margin

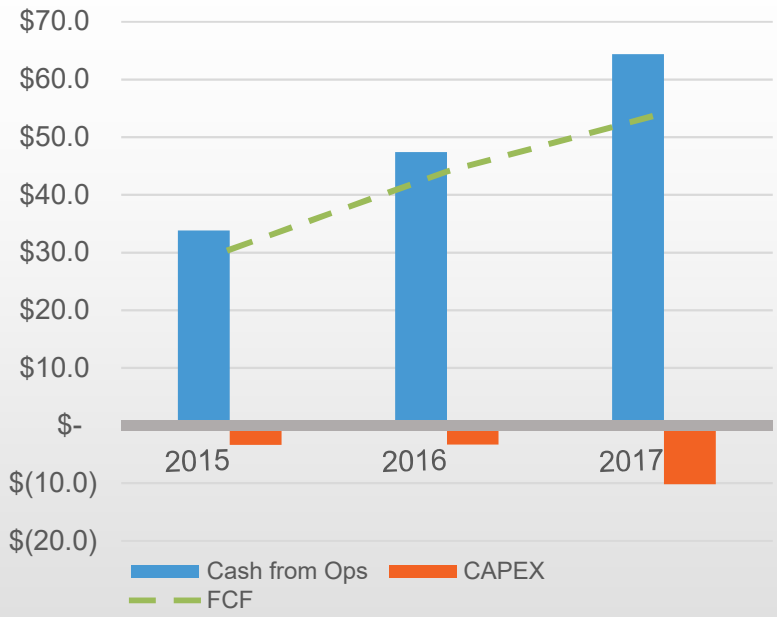
Tomorrow
30%

Source: Management estimates

Free Cash Flow/Capital Allocation Priorities

How we deploy our strong cash generation

Free Cash Flow



Capital Priorities

Fund organic growth initiatives

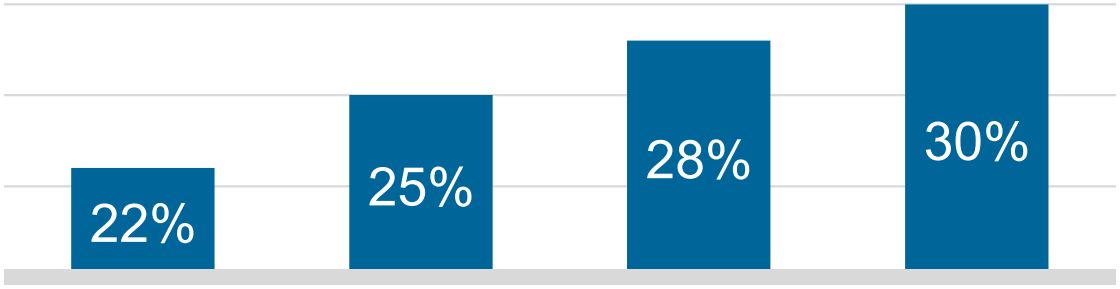
Strategic M&A

Return to shareholders

~10% *of shares repurchased through buy backs*

Operating Financial Model

	$250M MODEL	$300M MODEL	$350M MODEL	$400M MODEL
Gross Margin	53%	54%	55%	55%
Operating Margin	22%	25%	28%	30%



Model excludes the impact of OLED Initiative which is expected to be accretive to operating margins.

Source: Management estimates based on a Non-GAAP model

Future Growth Potential in High Resolution Displays

Increased Mobility & Function Driving New Technology Adoption

Adoption of AMOLED

Products driving more adoption

New Form Factors

Next generation products

OLED Materials

Flexible Substrates

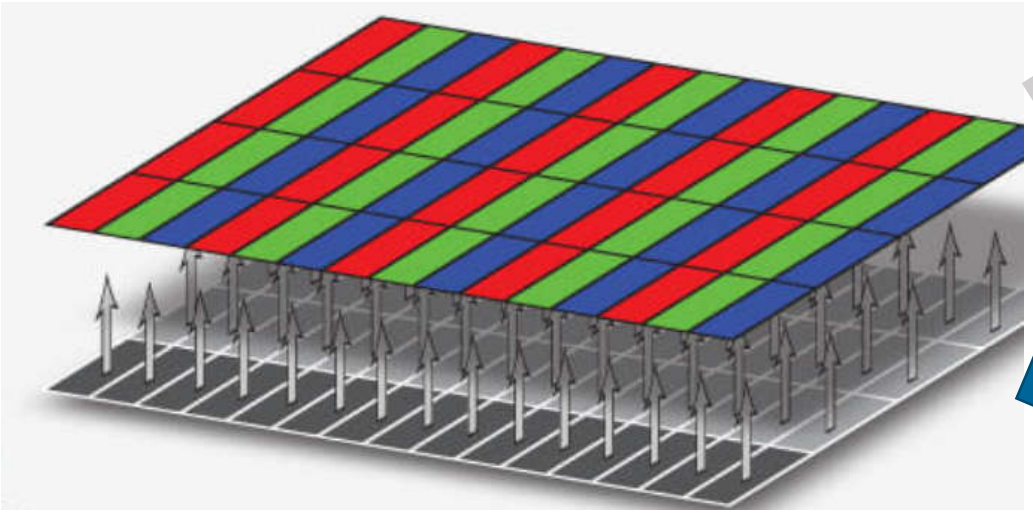
Higher pixel per inch (PPI)

Rudolph Lithography Solution Intersects Display Roadmap in starting 2020

Source: IHS

High Resolution Display

Backplane required to control pixels for any display



Emitted light from display
AMOLED
Quantum Dot
MicroLED

TFT Backplane
$500M TAM

Rudolph Developing a Lithography Solution for TFT Backplane

Key Takeaways

Market Growth Drivers Remain Healthy into 2018

Semi WFE and RTEC

New Products Increasing Rudolph Opportunities

OLED market potential to be transformative for RTEC

Strong Financial Model

Profitable growth, fueling R&D & cash for strategic M&A

谢谢 | 謝謝

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Thank You!

감사합니다

merci

obrigado

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