



# Flash Back Flash Forward

**ELI HARARI**

Chairman & CEO

**SanDisk**

# Forward-looking statement

During our meeting today we will be making forward-looking statements, as that term is defined in U.S. securities laws.

Any statement that refers to expectations, projections or other characterizations of future events or circumstances is a forward-looking statement, including, but not limited to those relating to new markets, industry trends, future chip capabilities, technological innovation, tablet use, adoption and sales, mobile market growth, mobile application use, product capacity, mobile video projections, projected or expected demand and supply within our industry, economic and/or industry recovery, the development of new markets and the future role of flash memory in current or developing markets, revenue, pricing, market share and growth, product sales, expenses, gross margin, future memory technology, production capacity, technology transitions and future products.

Actual results may differ materially from those expressed in these forward-looking statements including due to the factors detailed under the caption “Risk Factors” and elsewhere in the documents we file from time-to-time with the SEC, including our annual and quarterly reports.

We undertake no obligation to update these forward-looking statements, which speak only as of the date hereof.

# Agenda

- Flash Back, Flash Forward
- Industry returns to good health
- Waves of new Flash markets
- Conclusion

# Flash Back

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# Early Tablets

Homer's Iliad



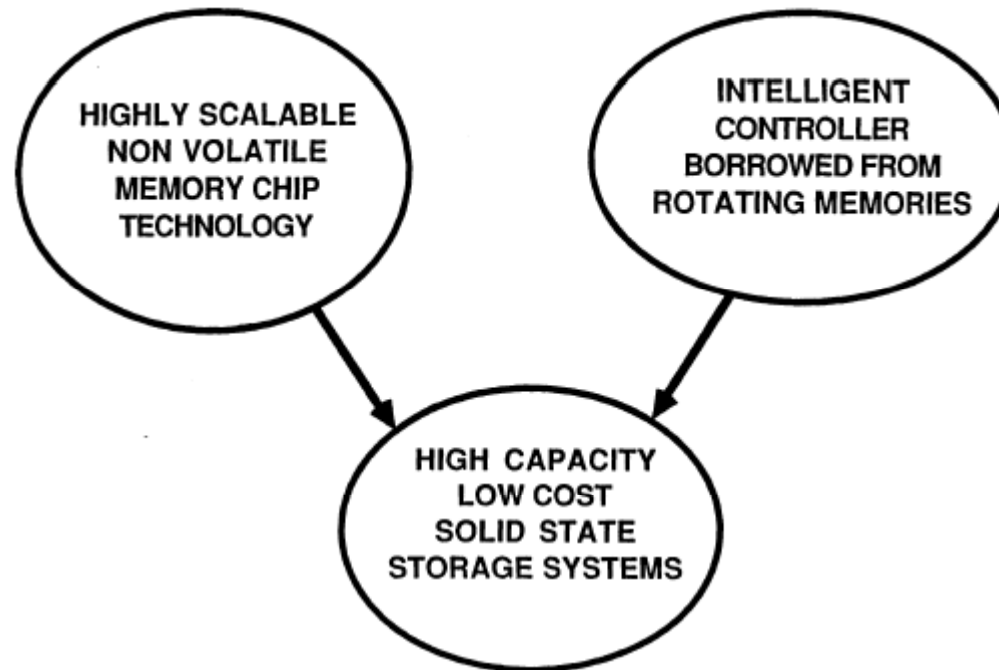
~ 500-600 BC

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# 1988: Data Flash is Born

Dec. 1989

## SunDisk Strategy



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# Moore's Law Flash Back

**\$250 -> 1 cent**

**15 Generations**

**20 Years**

**\$0 -> \$20B**



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# Happy Flash Days



## 100B transistors

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# Flash Forward

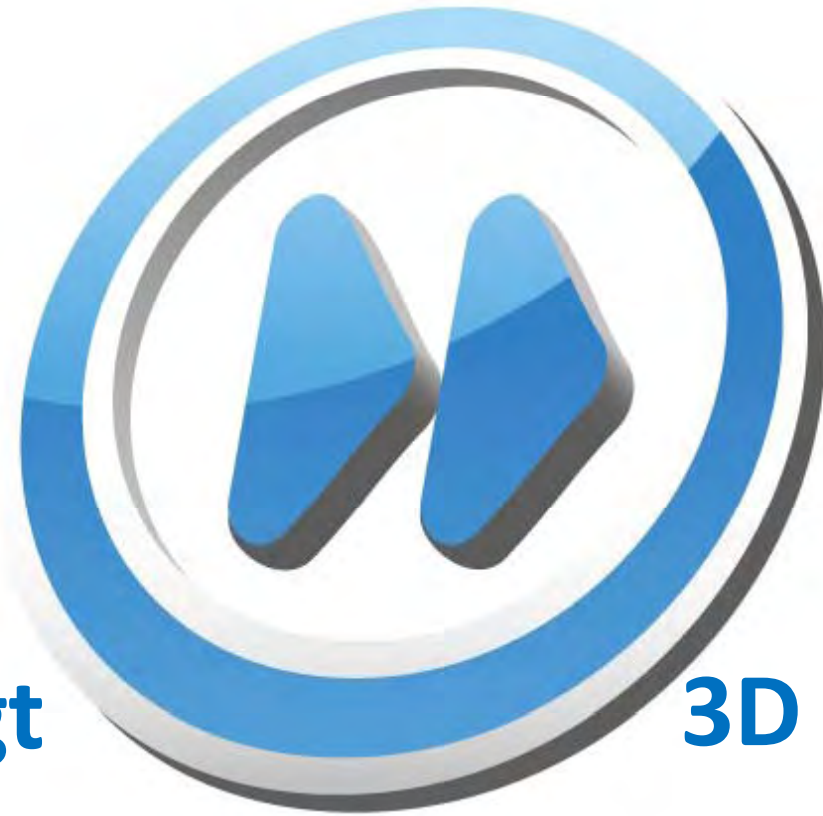
## Moore's law continues

NAND <20nm,  
Extreme UV

NAND >HDD,  
DRAM

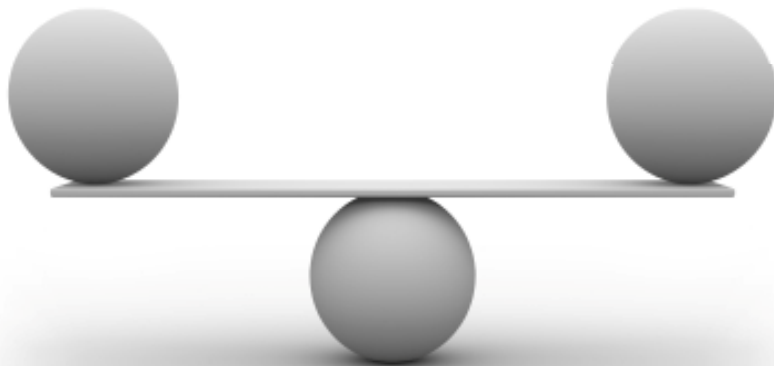
System mgt

3D Read/Write



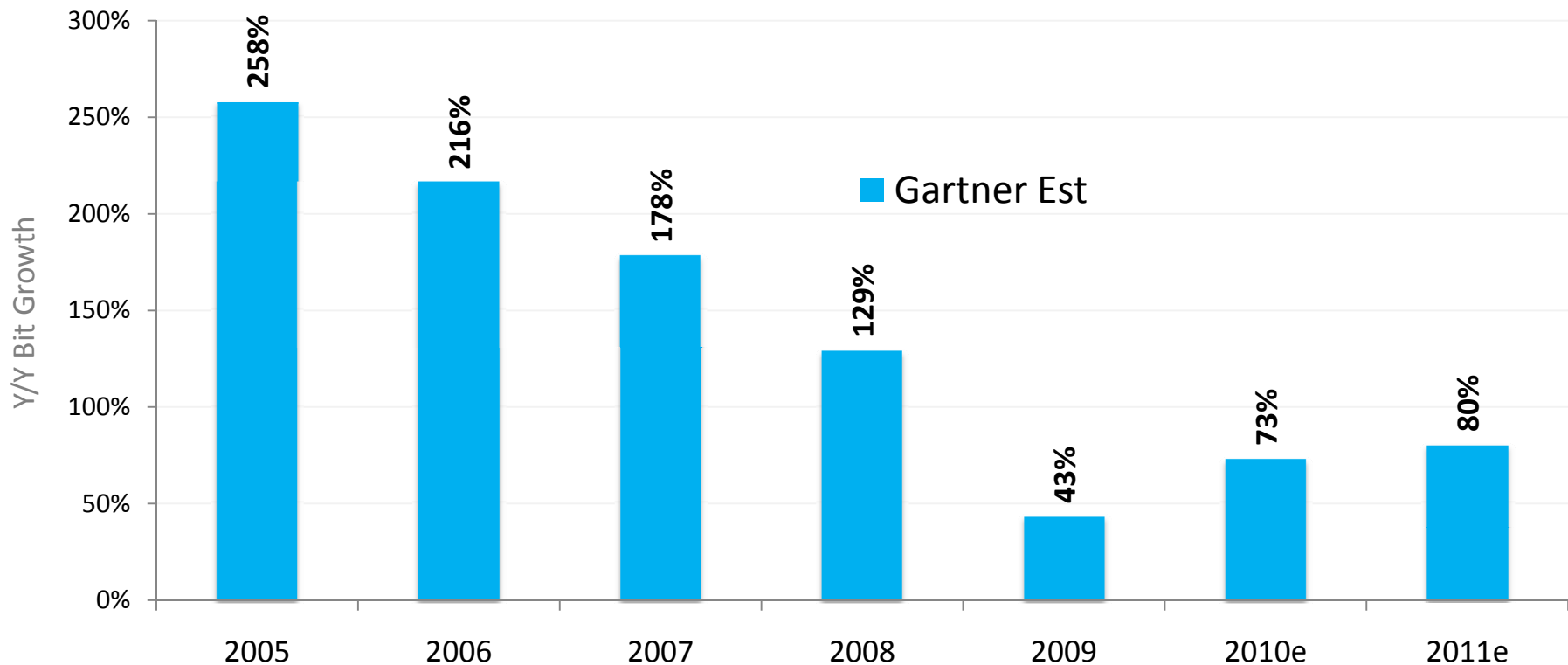
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# NAND Industry Demand-Supply Trends



# Projected NAND SUPPLY in 2010-11

## Lessons of 08-09 → No new fabs in 08-10

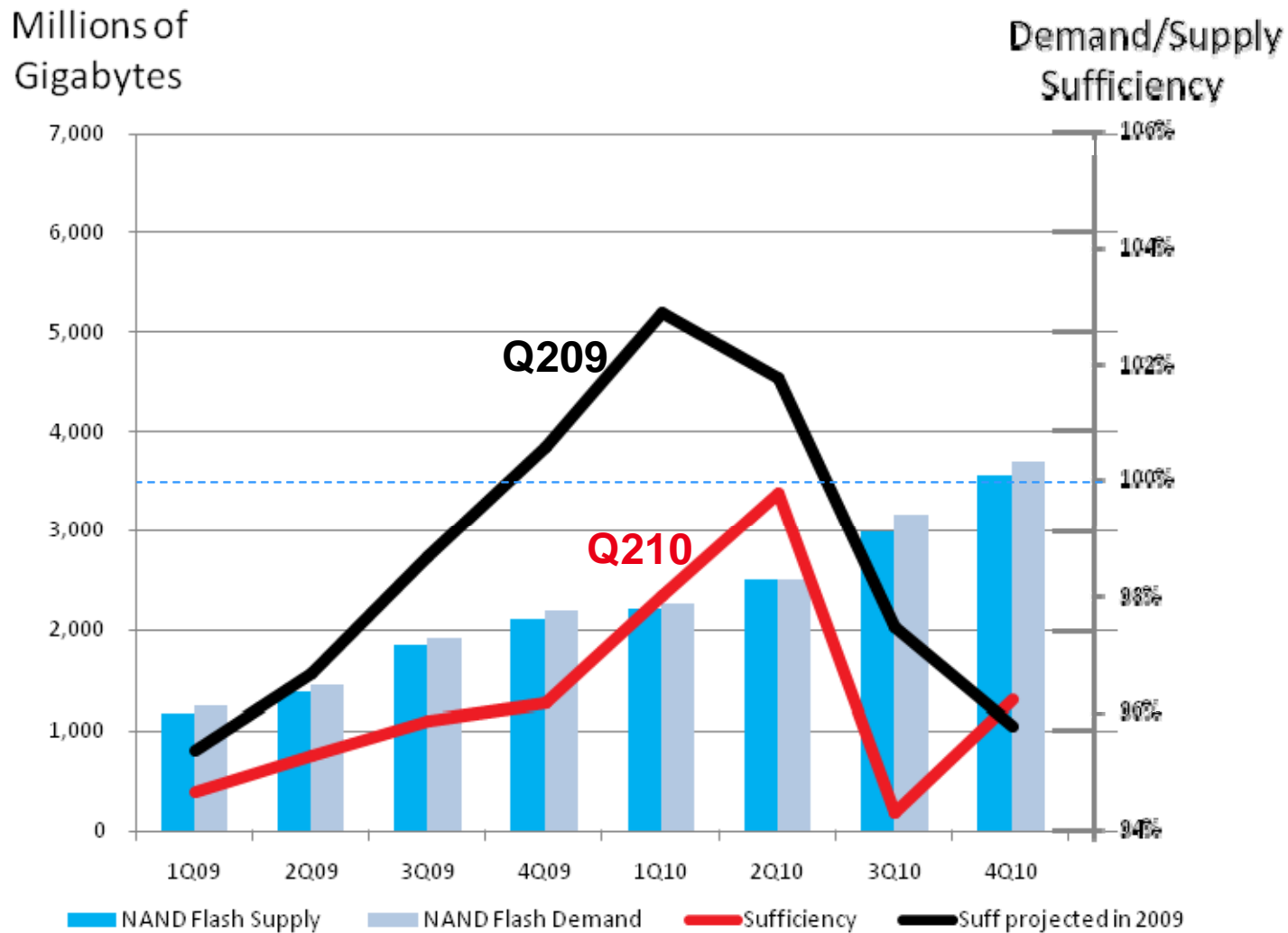


**2011 includes 1<sup>st</sup> output from new NAND fabs**

Source: Chart created by SanDisk based on data from Gartner:  
Forecast: NAND Flash Supply and Demand, Worldwide, 1Q09-4Q11, 2Q10 Update – June 2010

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# Demand/Supply balance: self correcting



Sources:

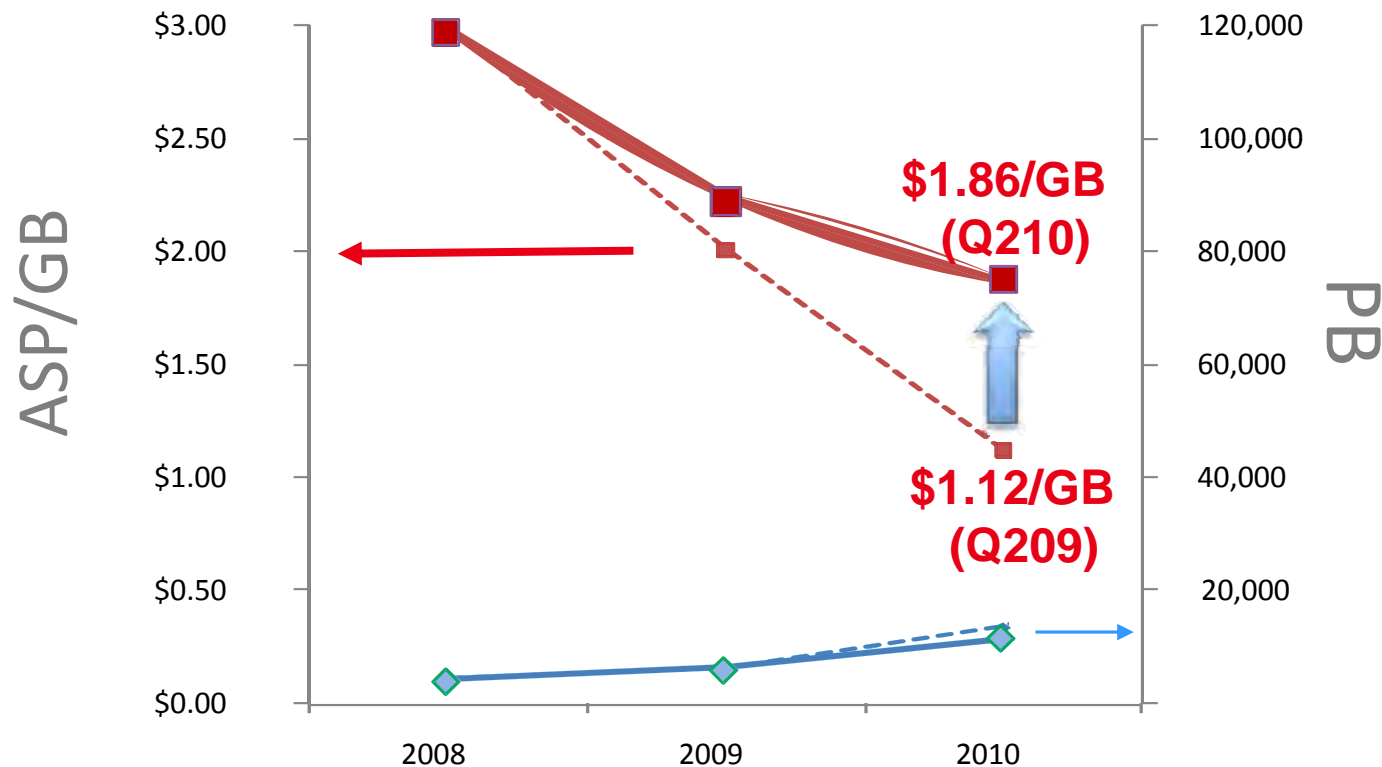
Gartner June, 2010 - "Forecast: NAND Flash Supply and Demand, Worldwide, 1Q09-4Q11 (2Q10 Update)"

Gartner May, 2009 - "Forecast: NAND Flash Supply and Demand, Worldwide, 1Q08-4Q10 (2Q09 Update)"

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# Industry HEALTH Returns

**2010 NAND market = \$20.8 Bn (Gartner Q210)  
=\$15.1 Bn (Gartner Q209)**



*Sources:*

*Gartner June 2009 - "Forecast: Memory, Worldwide, 2004-2013 (2Q09 Update)"*

*Gartner June 2010 - "Forecast: Memory, Worldwide, 2004-2014 (2Q10 Update)"*

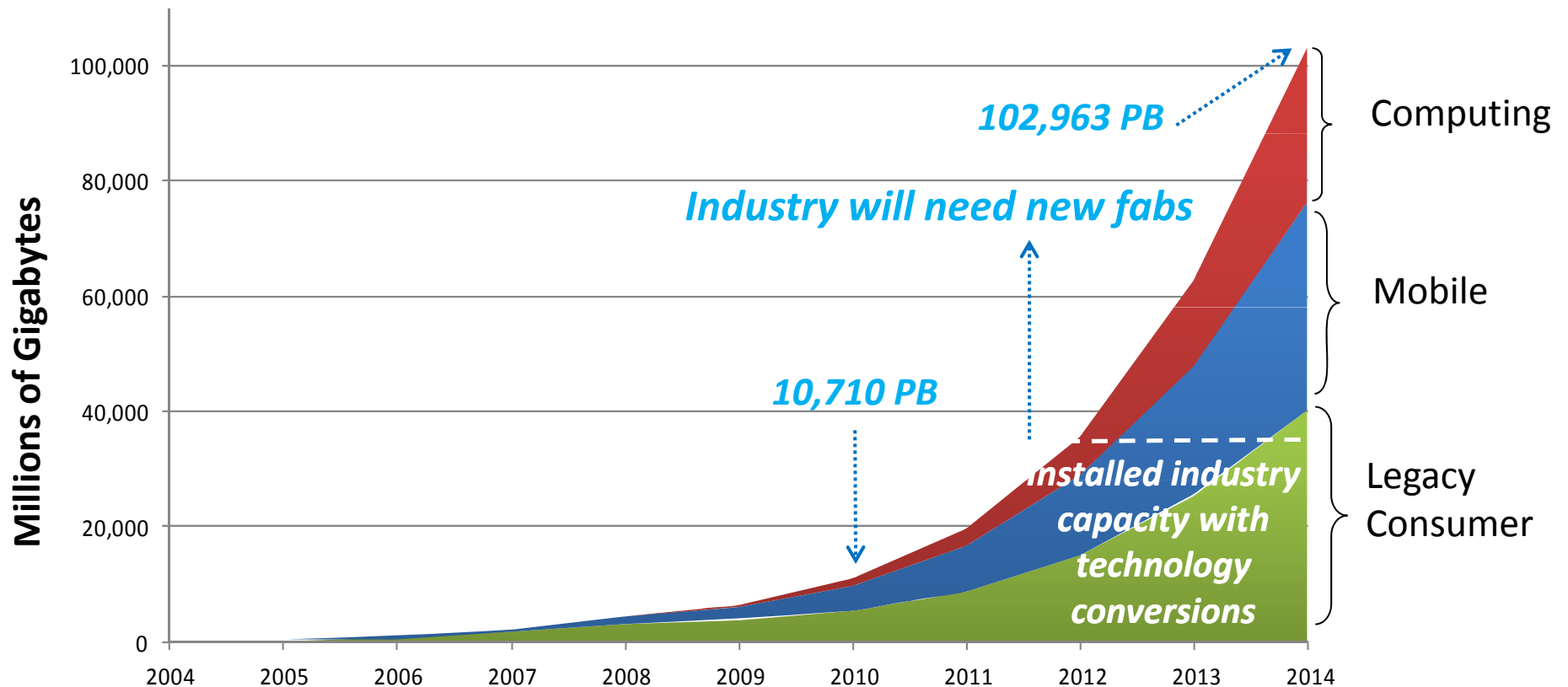
*Chart created by SanDisk based on Gartner data*

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# New Markets driving New Supply

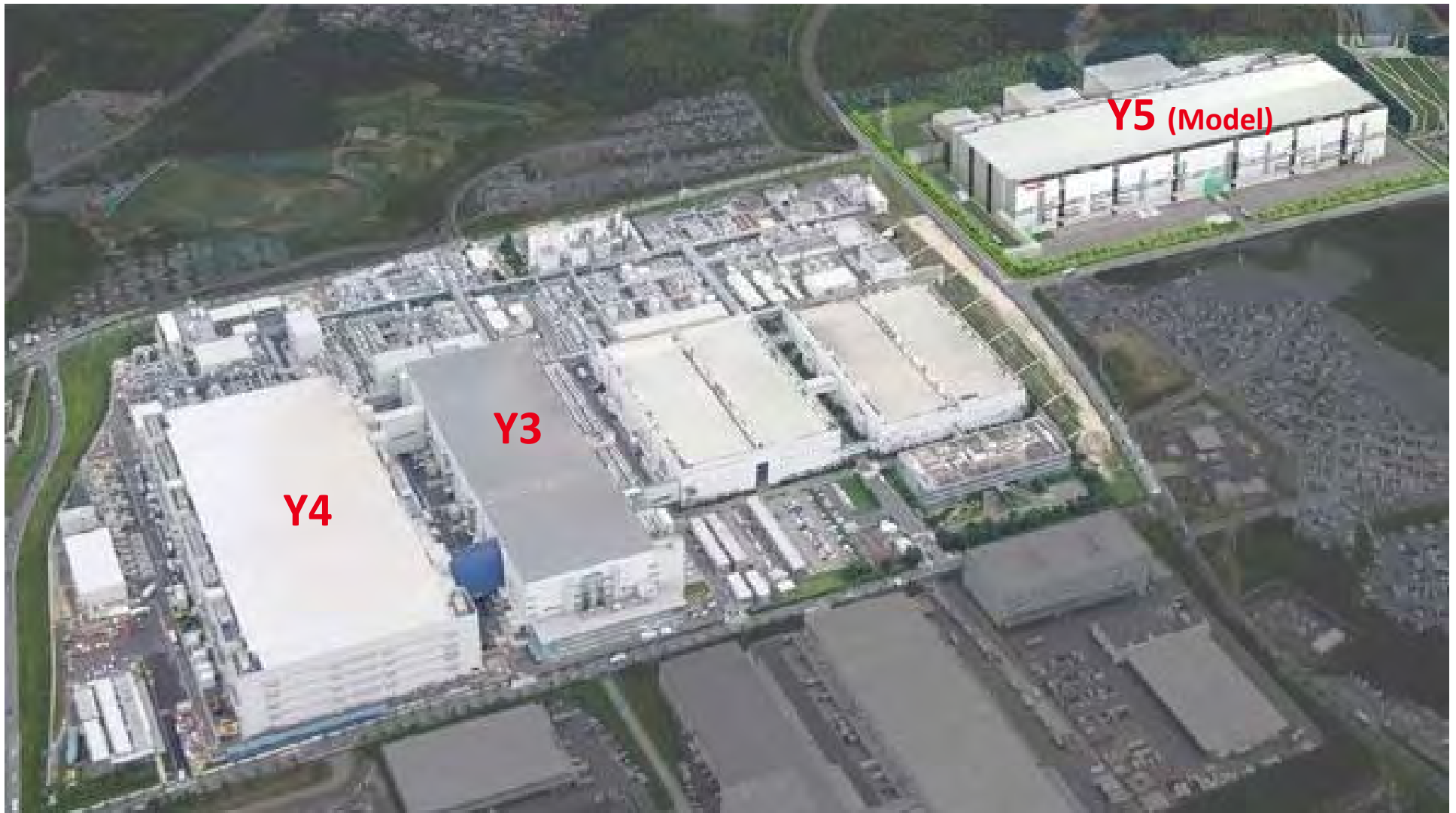
Disciplined capacity additions key to sustained healthy industry growth



Source: Chart created by SanDisk based on data from Gartner:  
Semiconductor Forecast Worldwide--Forecast Database [SEQS-WW-DB-DATA] - June 2010

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# Yokkaichi NAND Flash Fabs



Y4 ramp – 2007-2011

Y5 ramp – starting H2/2011, phased to meet demand

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# Waves of New Markets enabled by Flash



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# More e-Books than hardcover



Sources:  
Newsweek cover story 11/17/07  
Amazon press release 7/19/10

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Flash has the power to  
democratize education  
worldwide



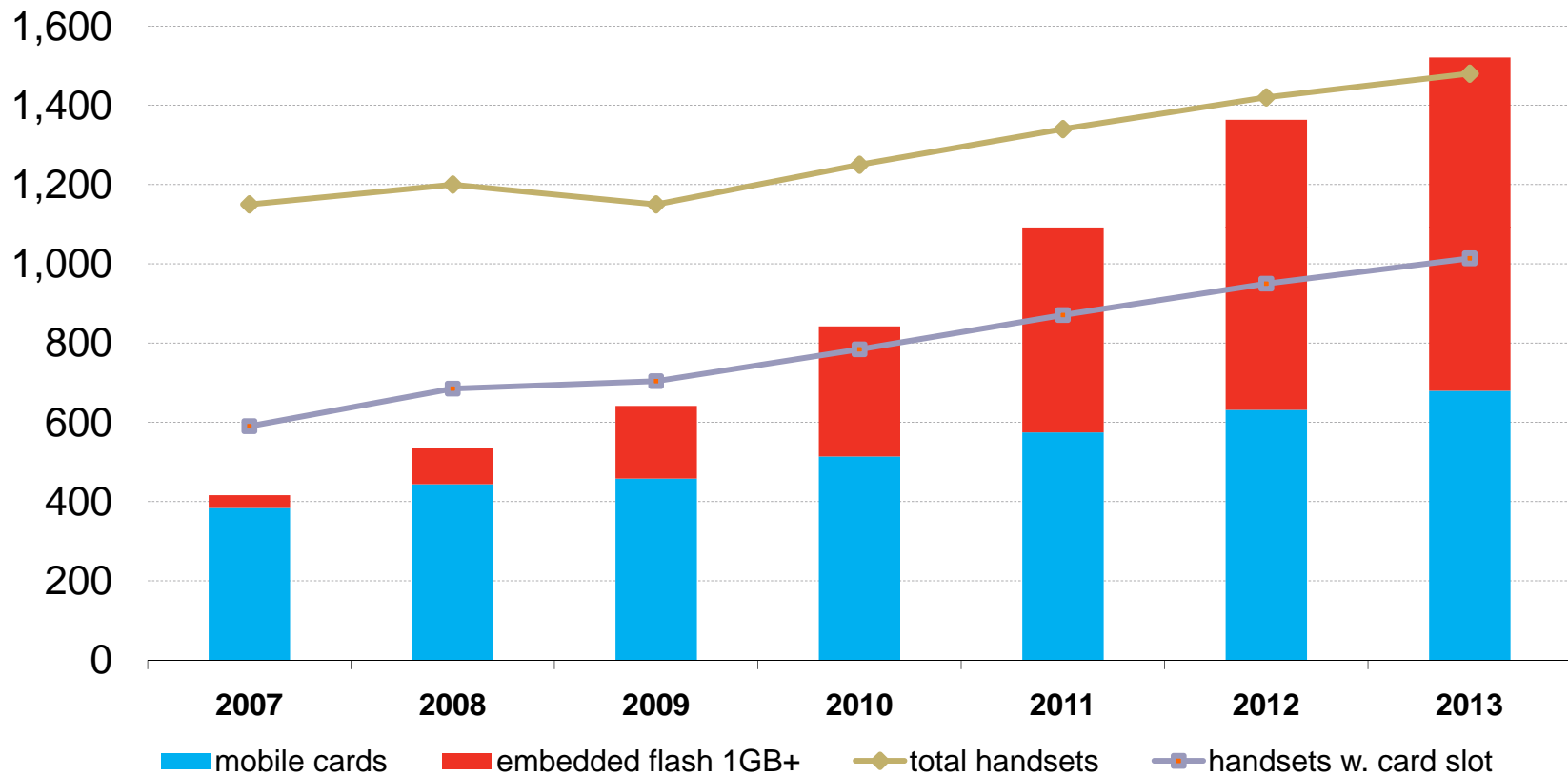
\$35  
tablet to  
110 Million  
students

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*Source: Government of India-Ministry of Human Resource Development Press Release, 8/7/10*



# Mobile Growth



Source: Wireless Device Strategies Service, Strategy Analytics, February 2010

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# The New PC

iPad: 3.3 million sold in first 3 months

Android: 200K activations per day



Sources:

Apple Q3 earnings press release on 7/20/10

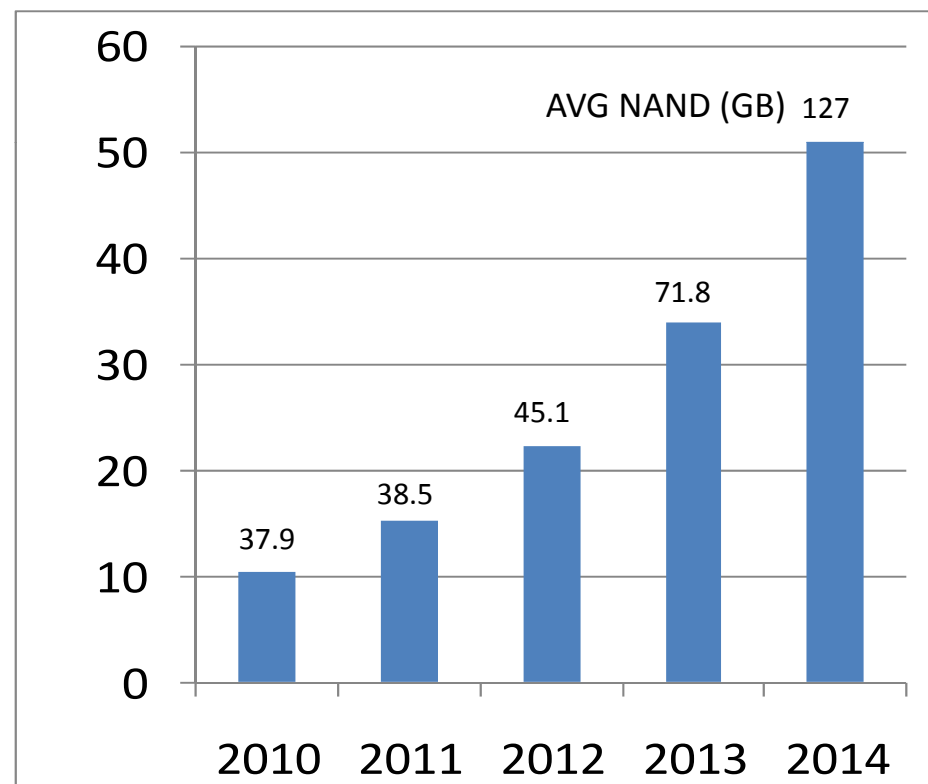
Google's Eric Schmidt, quoted at Technomy in TechCrunch article, 8/4/10

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# Tablets Set to Grow



Tablets (MU)



Source: Gartner

Semiconductor Forecast Worldwide--Forecast Database - June 2010

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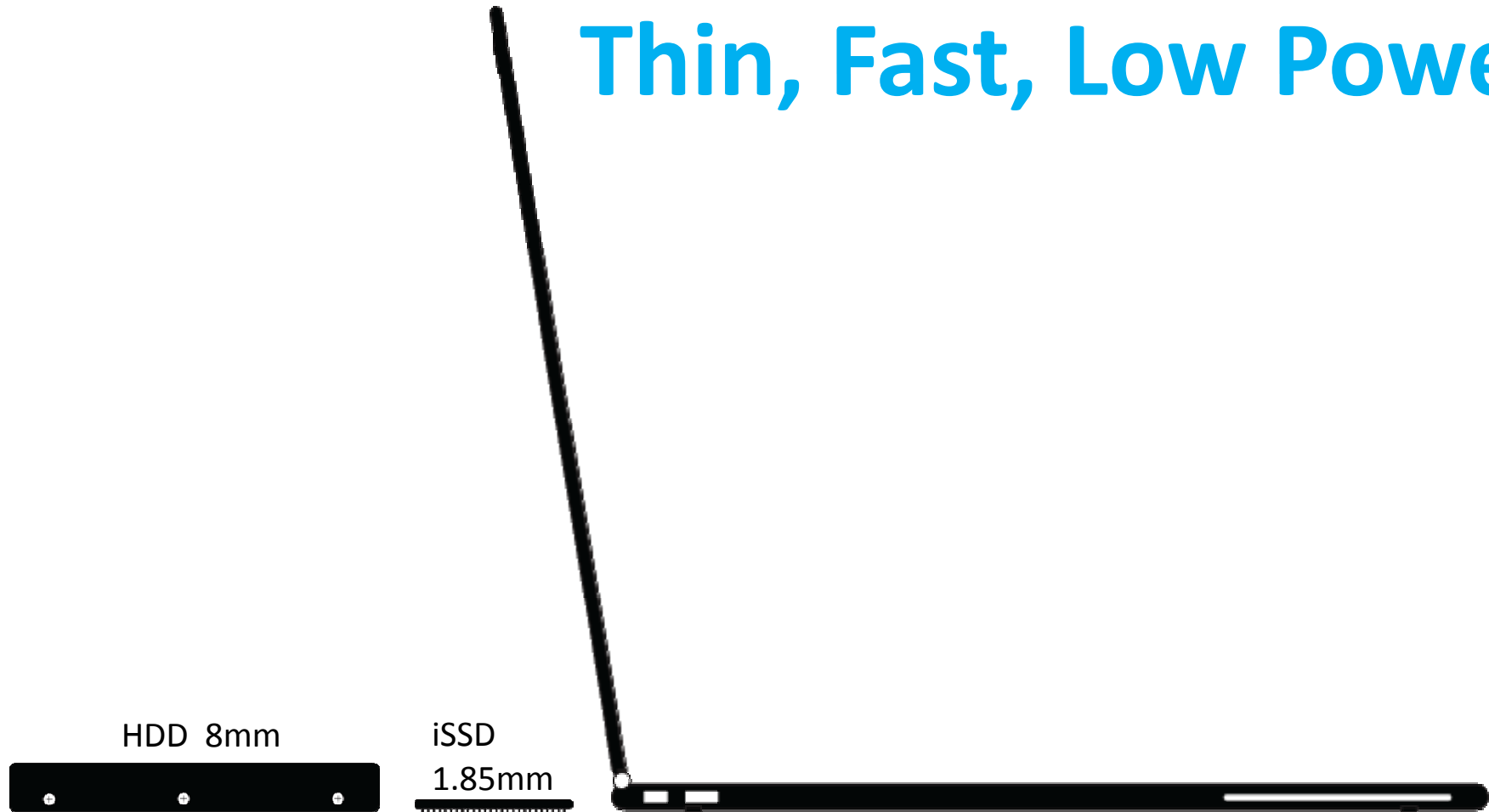
# Introducing iSSD



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# iSSD Enabling

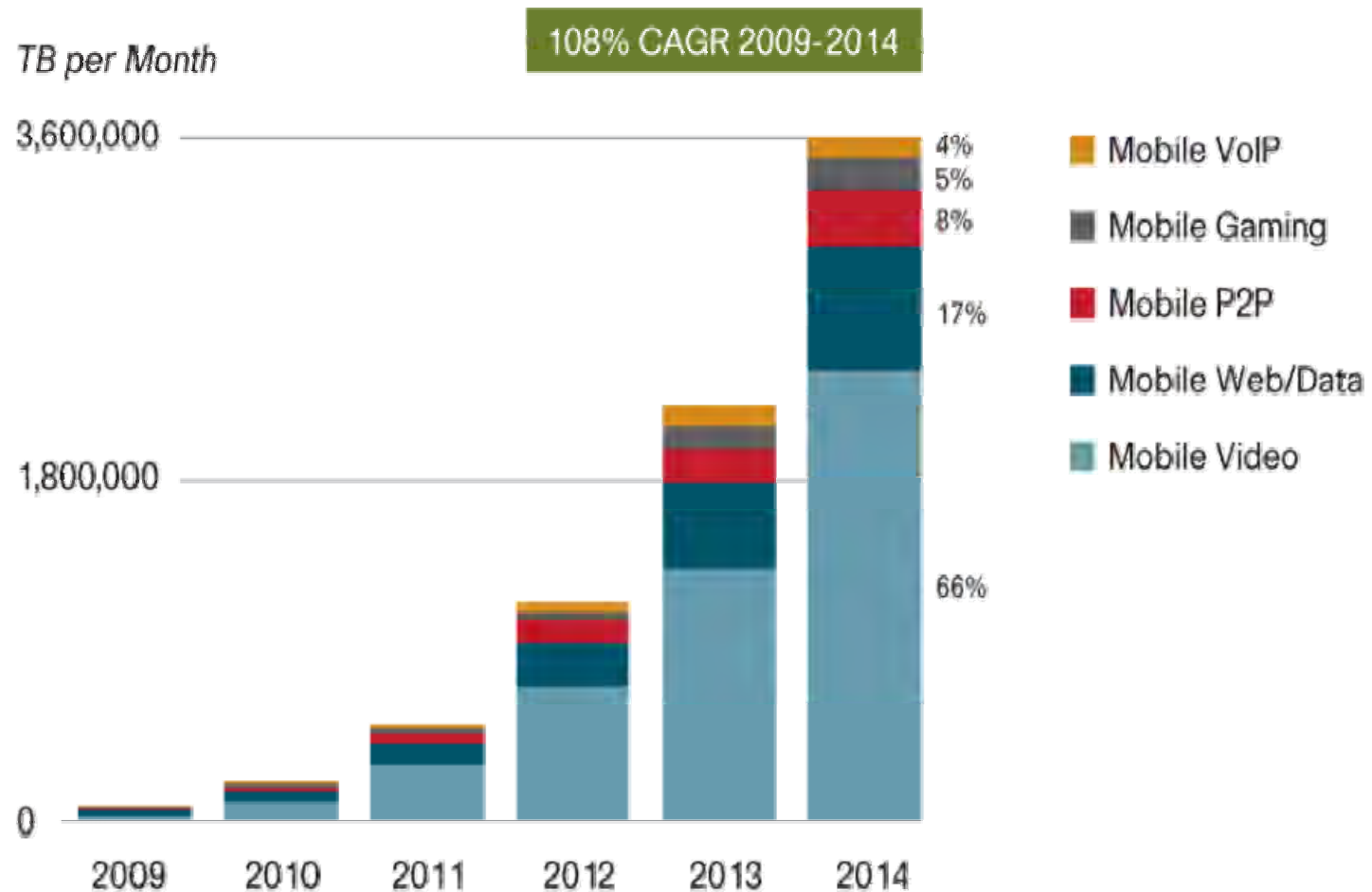
Thin, Fast, Low Power



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# Mobile VIDEO huge driver of wireless downloads



Source:  
Cisco VIN Mobile, 2010, Cisco.com

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The background of the image is a dense, repeating pattern of various mobile application icons. These icons are rendered in a light, semi-transparent style, creating a textured effect behind the main text. The icons include a wide variety of symbols, such as social media logos, productivity tools, and entertainment apps, all arranged in a grid-like fashion.

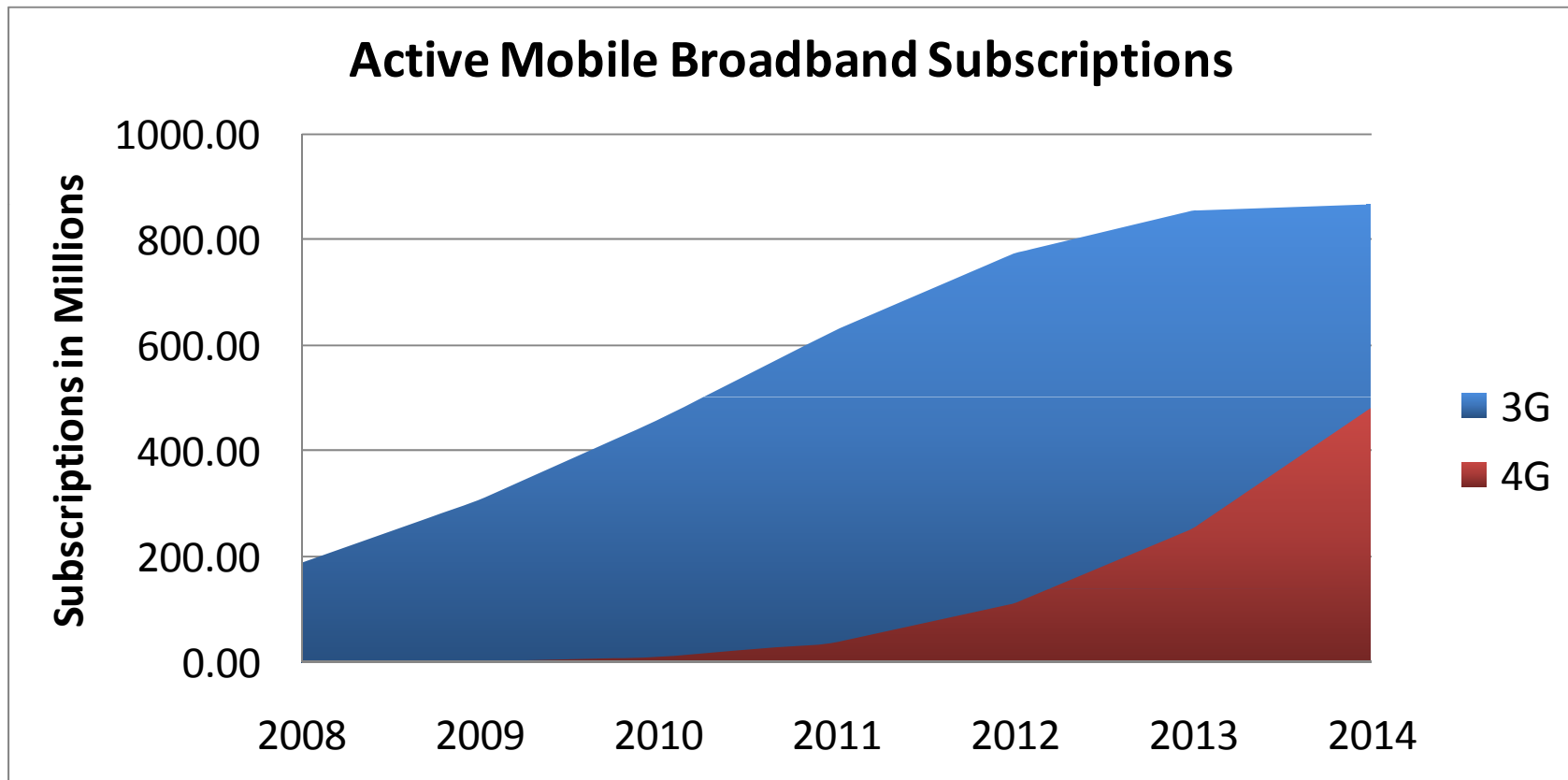
**more  
and more  
and more  
Apps**

**3G bandwidth  
can be  
more  
costly  
than NAND**



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# 4G will drive need for local flash storage



Source: Strategy Analytics, Global Active Mobile Broadband Subscribers Forecast: 2008-2014, January 2010 **SanDisk®**



# Flash as the First



# and Last Node on the Network



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**Mobile Internet, apps  
social networking, cloud  
expected to drive demand for  
more flash bits  
than ever...**

**“In the coming decade flash  
will be bigger than you think!”**

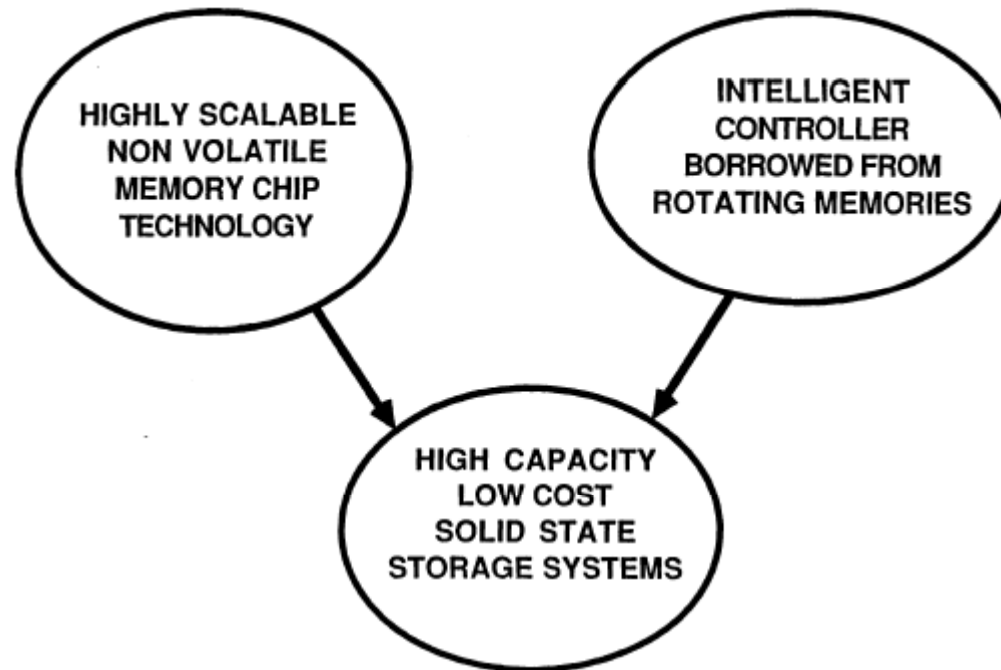
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# One Simple Idea...

## SunDisk Strategy

Dec. 1989



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Thank you all for a most  
fantastic journey these  
past 37 years.

Elí



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