

SATS Opportunity— Delivering Value For the Emerging Consumer Market

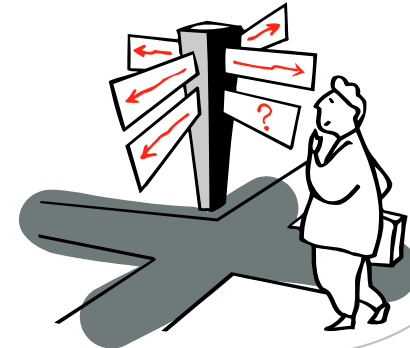
Interconnections Investors Conference

by
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D▲Side Advisors

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Overview

- ▲ Three Key Factors for Business Success
- ▲ Today: Semiconductor Industry Model
- ▲ Future: Consumer-Like Market Impact
- ▲ SATS — Leverage Capabilities for Growing Consumer-like Market Opportunity



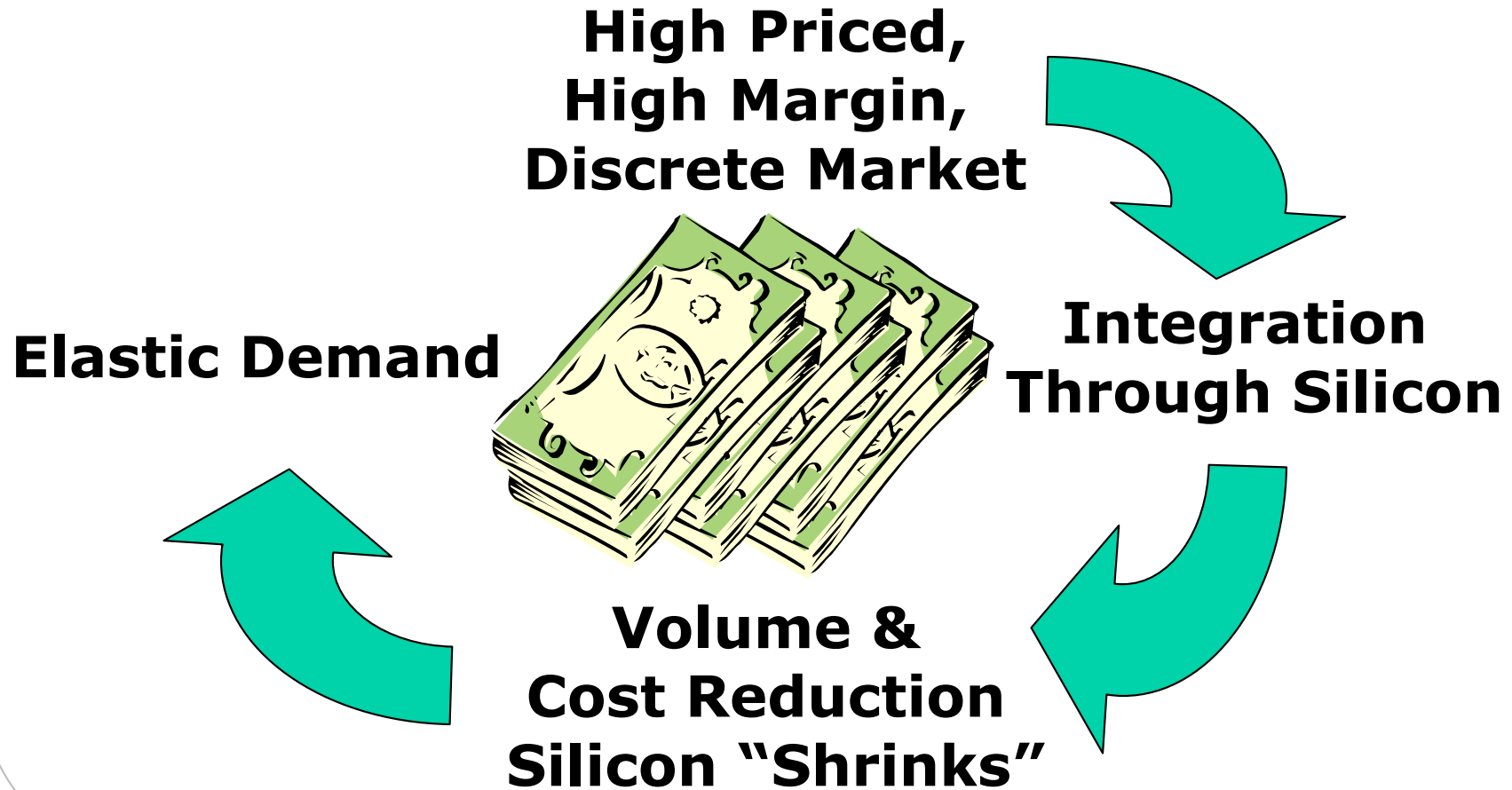
Keys to Business Success...

Value: What is valued by the customer?

Growth: How will you grow your business?

Profit: How do you capture the value?

Semiconductor Industry's Fundamental Model Revolves Around the Silicon!



Semiconductor Business Success...

Value: Silicon: Component Integration

Growth: Front End Mfg: Low Cost, High Volume

Profit: Elastic Demand: Big, Deep Markets

Assembly, Packaging, Test – They Call it The Back-end, Why?

Value: Silicon: BE Labor Intensive—> Outsource

Growth: Volume: More Die, More Dollars!

Profit: Cost: Greater Volume over Fixed CapEx

Consumer-Like Markets — Changes The Playing Field!



Product Issues:

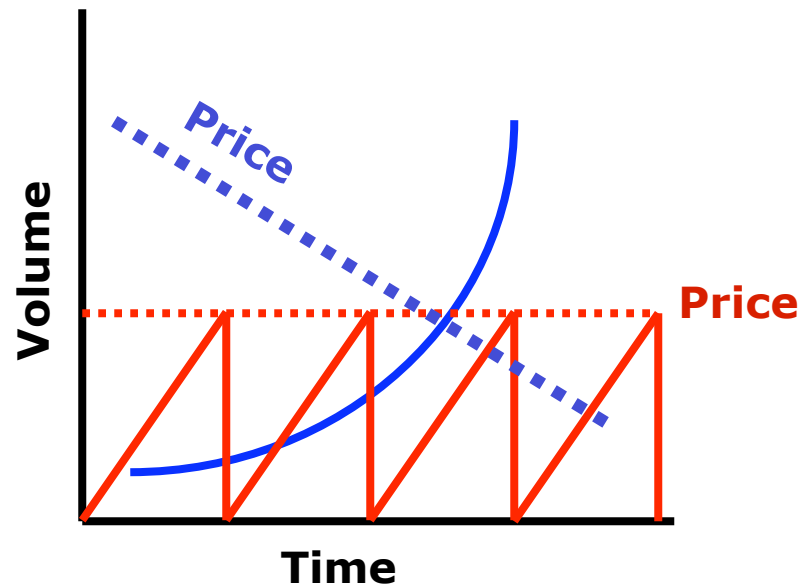
- ▲ Feature Set
- ▲ Technology Mix
- ▲ Volume
- ▲ Time to Market
- ▲ Edsel vs. Mustang

All at a

Non-Spousal Approval Price Point

Consumer Markets – Fixed Price Points

Fickle Buyers View Technology as Fad



Learning Curve

- ▲ Lower Cost, Elastic Demand
- ▲ Integration thru Silicon
- ▲ Technology is Strategic
- ▲ EDA, IDMs, Design Services and Foundry Wins

Order Stocking Model

- ▲ Fixed Price, Inelastic Demand
- ▲ Integration thru Prog. Platform, Packaging & S/W
- ▲ Supply Chain is Strategic
- ▲ EMS and OEM Wins

AI Dente Marketing...

Tossing a product into the marketplace to see what sticks

Silicon Marketing Cooking Process

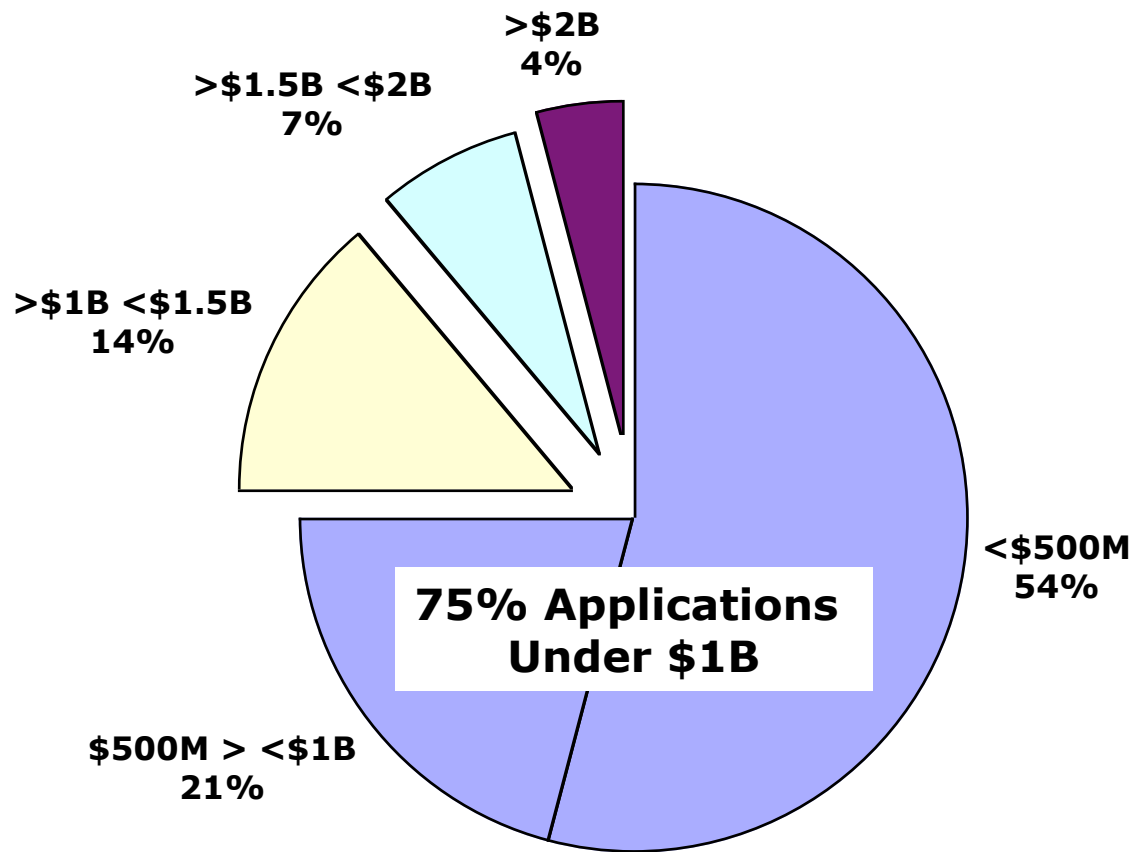
1. Launch a Product to Test Volume to Gauge Customer Appeal
2. Try Various Combinations of Functions to Find Interest
3. If Customer Like: Orders Roll In
4. If Customer Dislike: Channel demands "Take Back the Start Quantity."

Will You Get an Edsel or Mustang?

The Billion Dollar Market Gamble

Lotto-like Odds For Scoring a Big Market

2003 Application Markets That Support Value Added ICs
(ASIC, ASSP, FPGA) % Count



Semiconductor Industry's Fundamental Model... **Is BROKEN!**

Non-Spousal Approval Price

**In-elastic Demand
Highly Segmented**

**Silicon Integration
Design Cost
\$15-\$25M/design**

**Silicon "Shrinks"
Now Costly!**



IC Cost Improvement?

Or You Have to Create Value Outside of Shrinks!

$$\text{IC Cost} = \frac{\text{Die Cost} + \text{Test Cost} + \text{Package \& Assembly}}{\text{Final Test Yield}}$$

- ▲ Assuming That IC Costs Will Fall Given Process Technology Improvements or Making It up on Volume Aren't Realistic
- ▲ The Value Proposition Must Leverage All Opportunities

Integration at the Package Level

Everest Challenge — Air Gets Thinner!

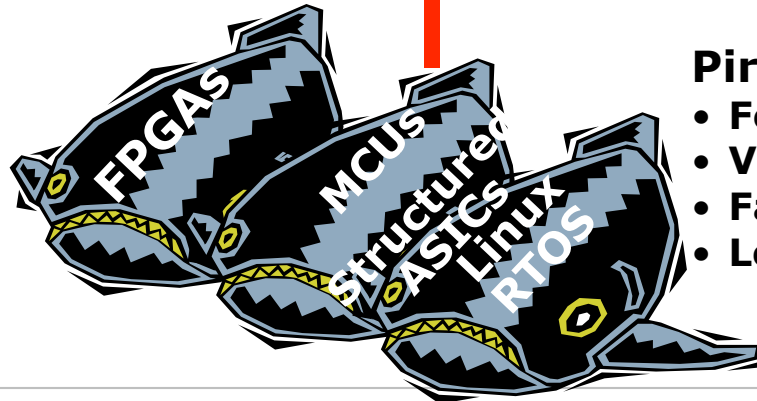
**Valued
by
IC
Vendor**

**SoCs
ASICs
ASSPs**

**Fabless IC Cos
&
Platform IC Cos**

**Valued
by
Systems
Vendor**

**Programmable Platforms
Package Innovation & Software**



Piranha Provide

- Feature Flexibility
- Volume Flexibility
- Faster Time to Market
- Lower Cost

Consumer Markets Change the Rules!

- ▲ Non-Spousal Approval Price Point vs. Corporate Sign-Off
 - Fixed Price Points
 - Uncertain Volumes
 - Rapid Time to Market

- ▲ Al Dente Marketing vs. Planned, Defined Markets

- ▲ Order Stocking vs. Learning Curve Model

- ▲ Highly Segmented Markets vs. Big, Deep, Markets

- ▲ Programmable Silicon Platforms vs. Accelerating ASIC Cost
 - Design Costs
 - Mask Costs
 - Process Costs

Where is the Value Now?

Value: System: Time to Market

Growth: Time to Market: Rapid Product Intros

Profit: Software: Drivers, Functional Blocks,
Connectivity

Assembly, Packaging, Test – Call it The Value-Add Not Back-End

Value: Packaging Solutions: Time to Revenue

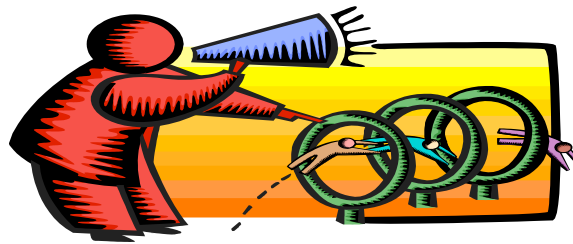
Growth: SiPs, MCMs, Test Services

Profit: Profit Center: Value-Added Packaging Solutions

Leverage Unique Traits to Win in Consumer Markets

Capturing More Value

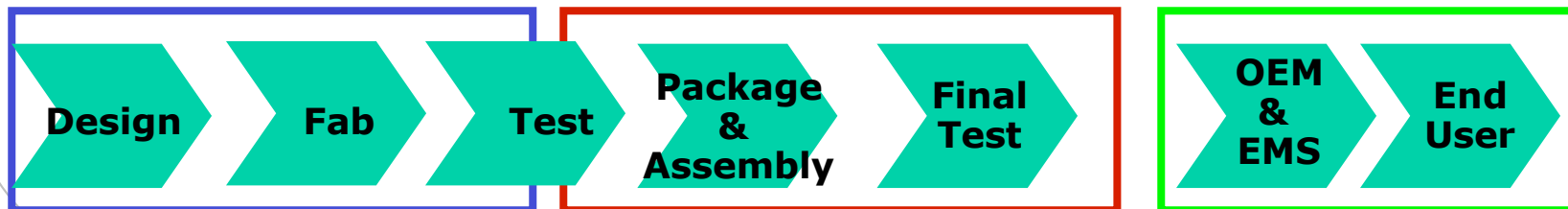
- ▲ **Historically:** Value Resided In Chip and Design
- ▲ **Today:** System Architecture Determines Value
- ▲ **Future:** Packaging Technology Adds More Value to System As the Silicon Is Virtually Free!



Front End

Value End

Customer



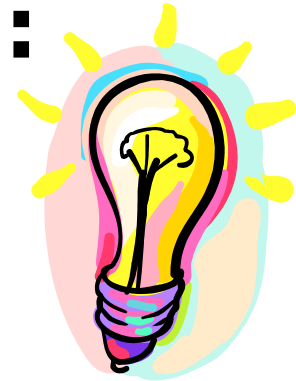


Year of the Monkey – Good News for SATS

- ▲ Increase Perceived Differentiation
- ▲ Leverage Capex: Not on Volume but on Added Value
- ▲ Reduce Pressure on Cost Through Package Innovations
- ▲ Capture Margin by Moving From Service to Product
- ▲ Gain New Customer Set
 - OEM
 - EMS

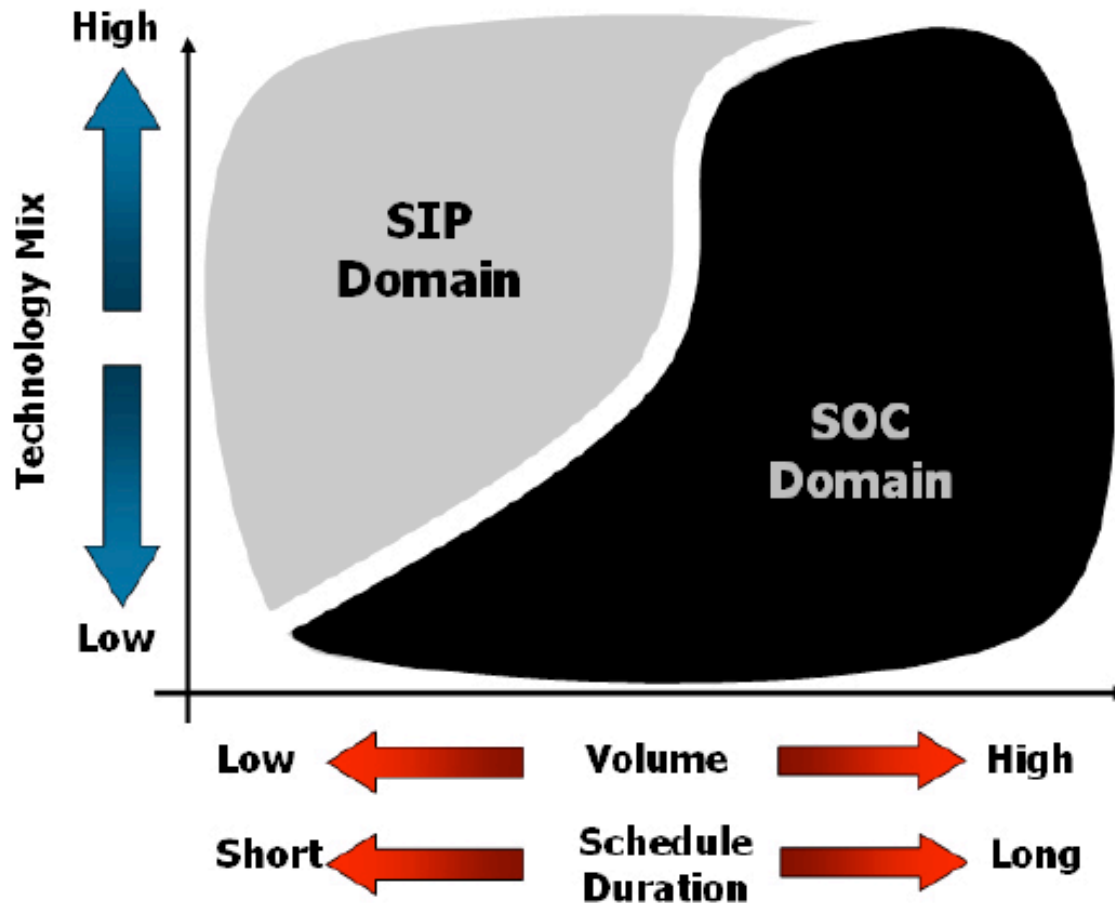
**Consumer Market Brings Unique Opportunity For
SATS to Create Value Through Packaging**

SATs Delivers Customer Win: Package Solutions Bring Value...

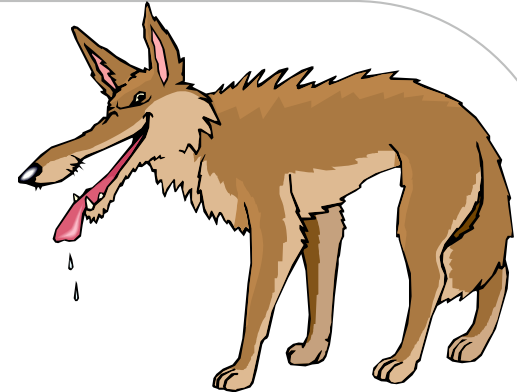


- ▲ Faster Time to Market
- ▲ Reduces Cost Without Silicon Integration
- ▲ Inherent Higher Reliability
- ▲ Niche Market Friendly, Not Volume Dependent

SATS Provide Flexibility to OEM/ODM



Benefits to SATS From The New Opportunity



- ▲ Change Dynamic of Relationship With IC Vendors
 - Their customers become your customers
 - IC firm becomes vendor vs. oppressor
- ▲ Deliver Greater Margin, Profit and Ultimately Market Capitalization
- ▲ Keep the EMS Wolf From Devouring Your Business

Keys to Business Success Is in Understanding

Value: What does the customer values?

Growth: How will you grow your business?

Profit: How do you capture the value?

Think!

Value

Growth

Profit

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