

The Craft of Thinking

**Crossing the Divide
Between
Engineering and Marketing**

Raj Karamchedu

My Background

- 5 years: Product marketing manager
 - Silicon Image (HDMI chip marketing)
 - Systemonic (Philips Semiconductors) (WLAN chip marketing)
 - Chameleon Systems (software tools marketing)
- 5-1/2 years: Technical project manager, staff design engineer, Wireless communication systems
 - Cadence Design Systems
- BSEE, MSEE

Today's Themes

Premise:

- Most execution failures occur due to a breakdown in marketing vs. engineering interaction

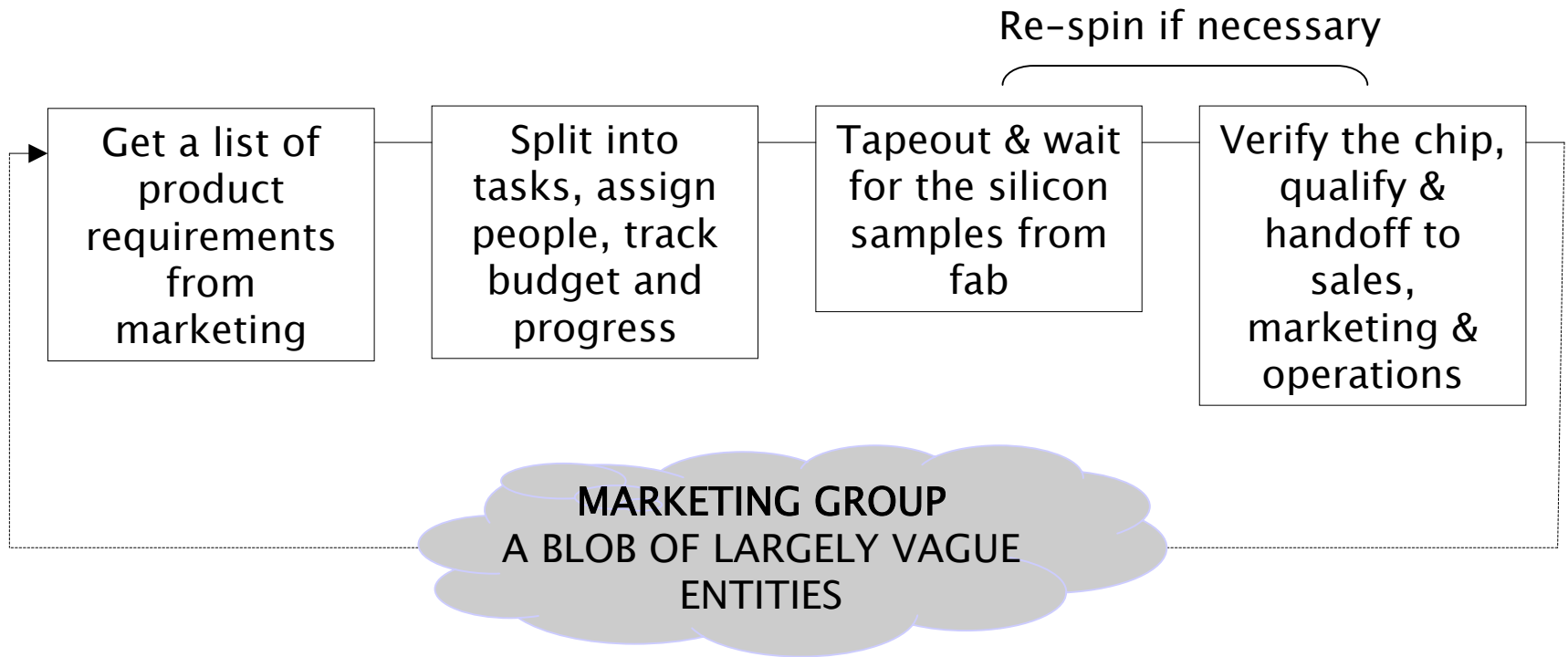
Proposition:

- This breakdown is due to a failure in the thinking

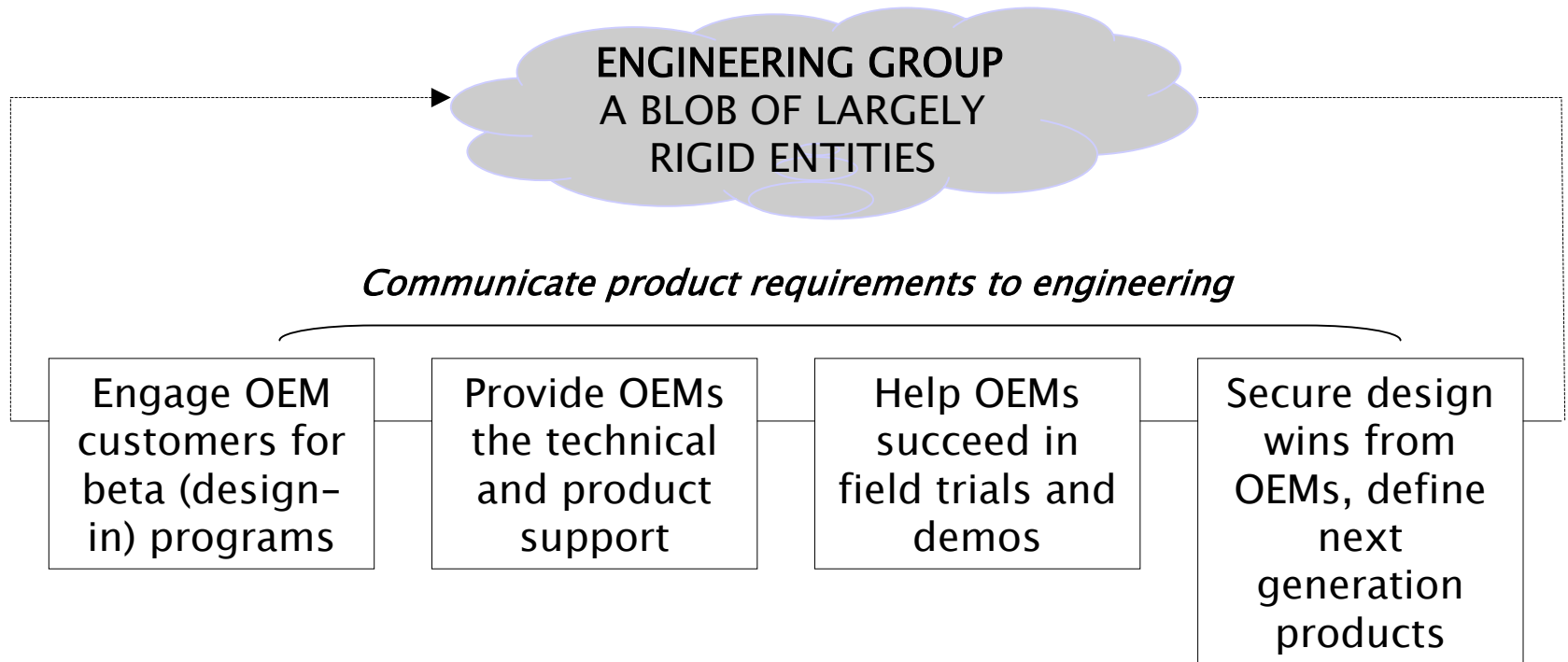
Exploration:

- What this thinking is, how it is not “just common sense” and must be learned *as a craft*

Mental Model: An Engineering Group's View



Mental Model: A Marketing Group's View



The Problem

- Most engineers do not *relate* to marketing
 - Yeah, marketing is important, but what *exactly* do you guys *do*?
- It all sounds like fakery
 - Some engineers are actually embarrassed to take marketing guys to design review meetings
- How can anything *so non-technical* be so important?

The Problem

- What is all this “differentiation,” “time-to-market,” “competitive advantage” stuff anyway? Sounds like a lot of “b.s.”
- Most designers believe that marketers are
 - Those sub-par engineers who couldn't make it in the intellectually superior world of design

Block-oriented Thinking

Get a list of product requirements from marketing

Split into tasks, assign people, track budget and progress

Tapeout & wait for the silicon samples from fab

Verify the chip, qualify & handoff to sales, marketing & operations

- Most technology-driven companies have a block-oriented view of the world:
 - Systematic, task-oriented, and data-flow like
 - Neat handoff points from one block to the next
 - Largely project/program management driven
- Real world markets are hardly this!

Engage OEM customers for beta (design-in) programs

Provide OEMs the technical and product support

Help OEMs succeed in field trials and demos

Secure design wins from OEMs, define next generation products

Easy Target: Market Changes → Conflict

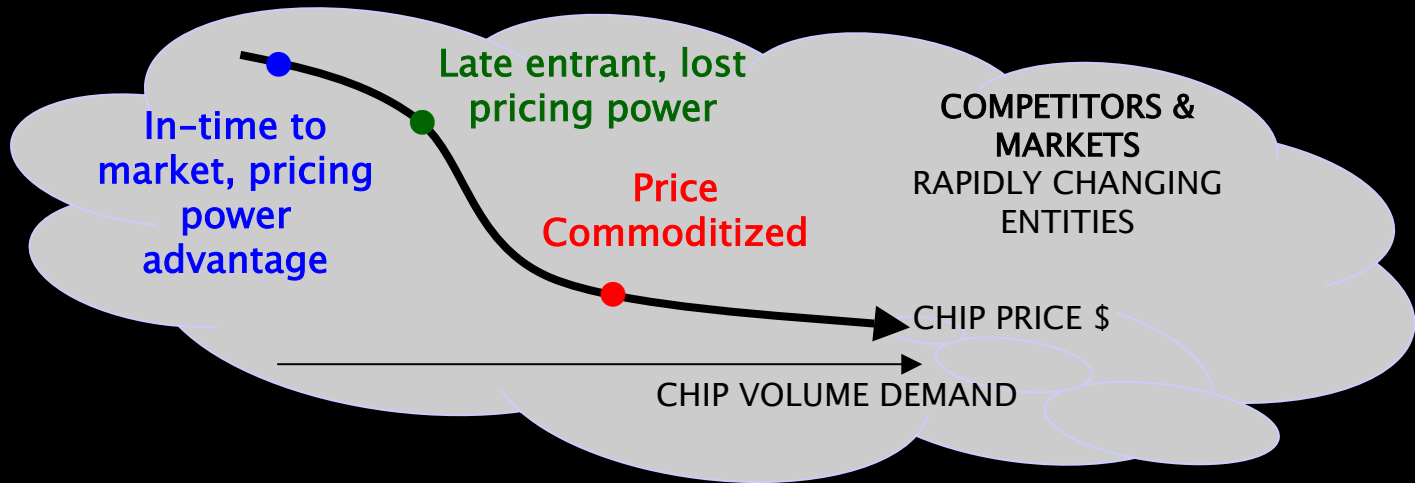
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ENGINEERING GROUP



MARKETING GROUP

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So, What to do?

- Real world markets abhor products that are not shaped by them.
- So, if you find yourselves in a conflict with engineering, it is usually a result of a change in the market, customer condition.
- Thinking = Thinking for markets
- Lesson: Coach your engineering colleagues to think like a good marketer. Easy, right?

Marketing Roles Are a *Result* of a Particular Kind of Thinking

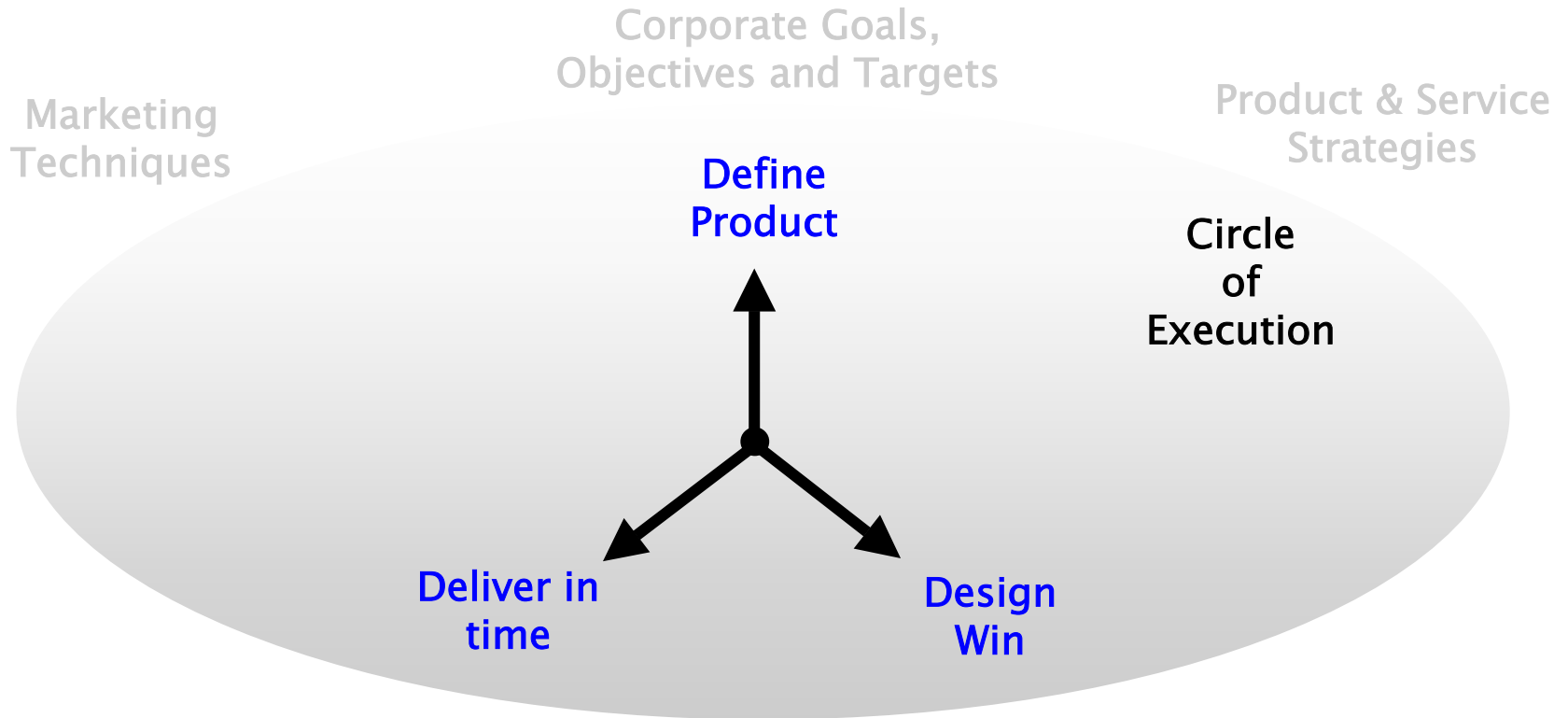


Goal of Marketing - Wrong

Don't confuse tools for goals



Goal of Marketing - Right

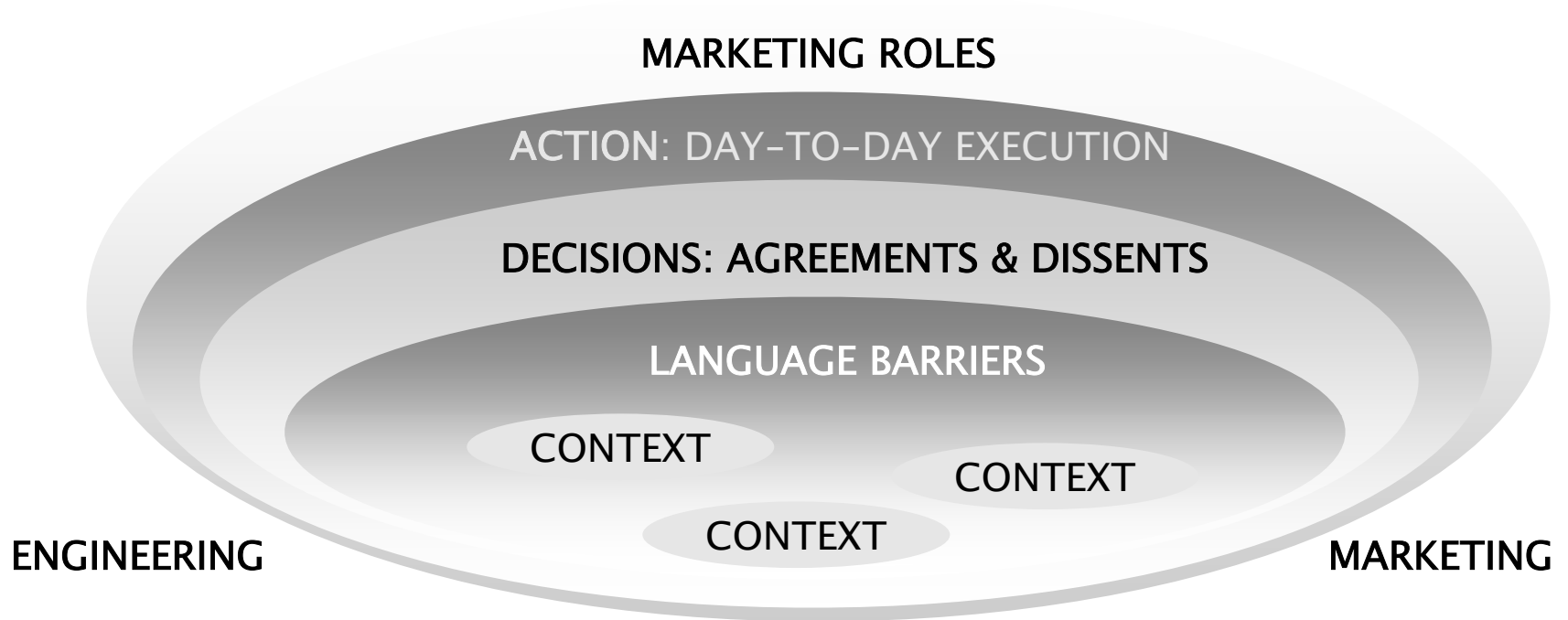


Whence Come the Seeds of Conflict?

- Teams are not prepared to tackle the pressures imposed by the circle of execution
 - It is a never-ending cycle: overlapping and staggered, but NEVER fully sequential
 - Lack of readiness to move with changing markets
- A typical engineering group has NO visibility into circle of execution in its entirety
 - Marketers have a tendency to hide the big picture

Execution is Not a Business Process

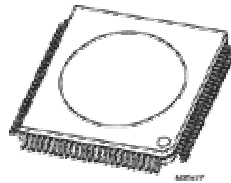
And We Are Prisoners of Our Own Contexts



Subtle is the Context!

- The problem is in our thinking.
- The meanings we ascribe to things around us is strongly based on *our own* context.

Validation
Engineer



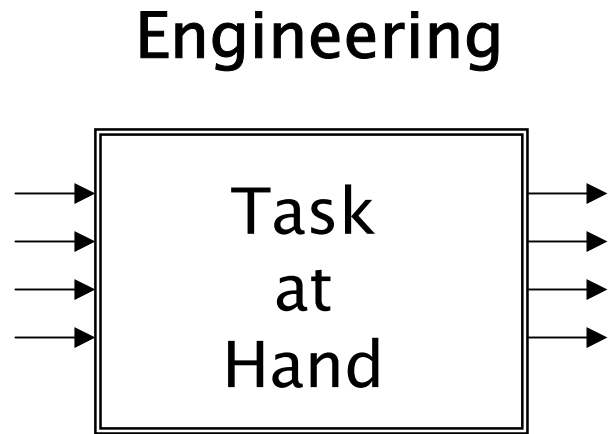
CEO

Product
Manager

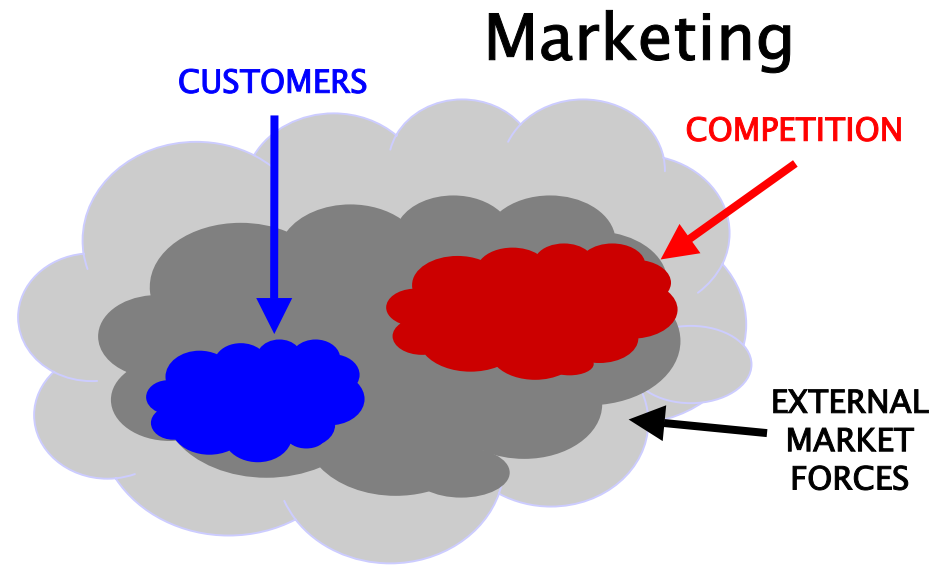
Finance
Manager

Operations
Manager

Tangibles Have a Powerful Presence



- Silicon Area
- Power Dissipation
- Function
- Efficiency
- Cost



- Identify target market
- Clarity in presentation
- Influence customer's decisions
- Business justification
- Define, win, deliver

The Cost Mindset in a Marketer's World

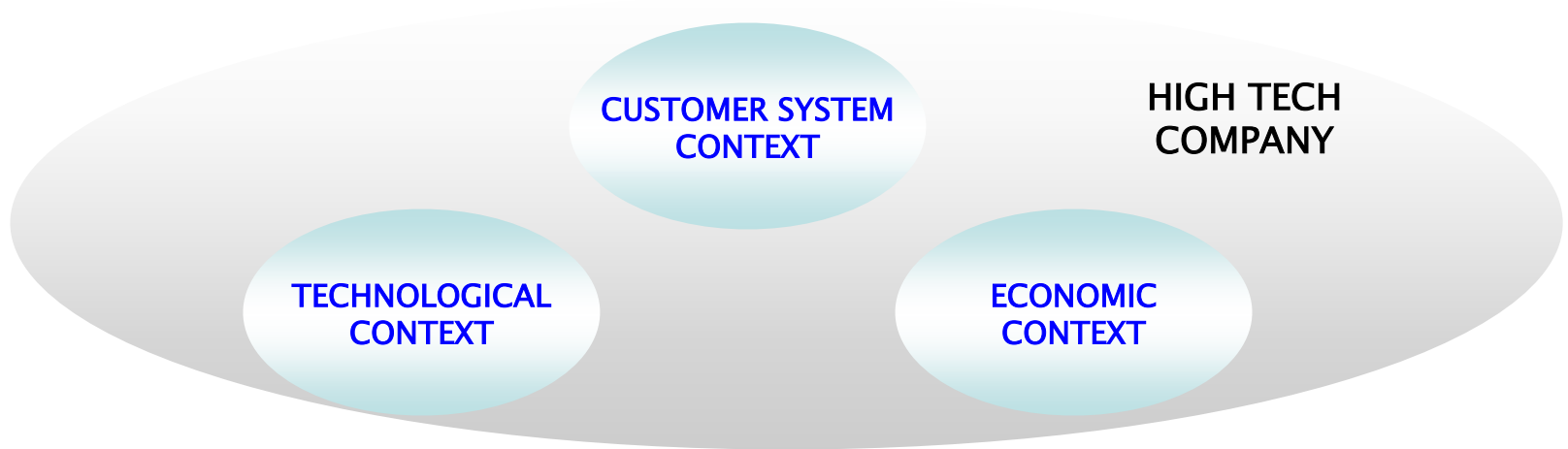
- Always intertwined with *choice* and *decision making*, hence it is opportunity cost.
- Depends on the Customer's perceived benefits of competitor's product. Less cost is better.
- Hard to track, as the Customer's perception of perceived benefits changes incessantly.
- Feature addition *decreases* customer's opportunity cost, hence GOOD.

The Engineer's Cost Mindset

- Engineer's Cost: Budgetary.
- Stripped of choice-dependencies. All decisions are made already.
- Real. Not perceived.
- Measurable. Not subjective.
- Used in Executive staff meetings.
- Feature addition increases project cost, hence **BAD.**

So, How to Cross the Divide?

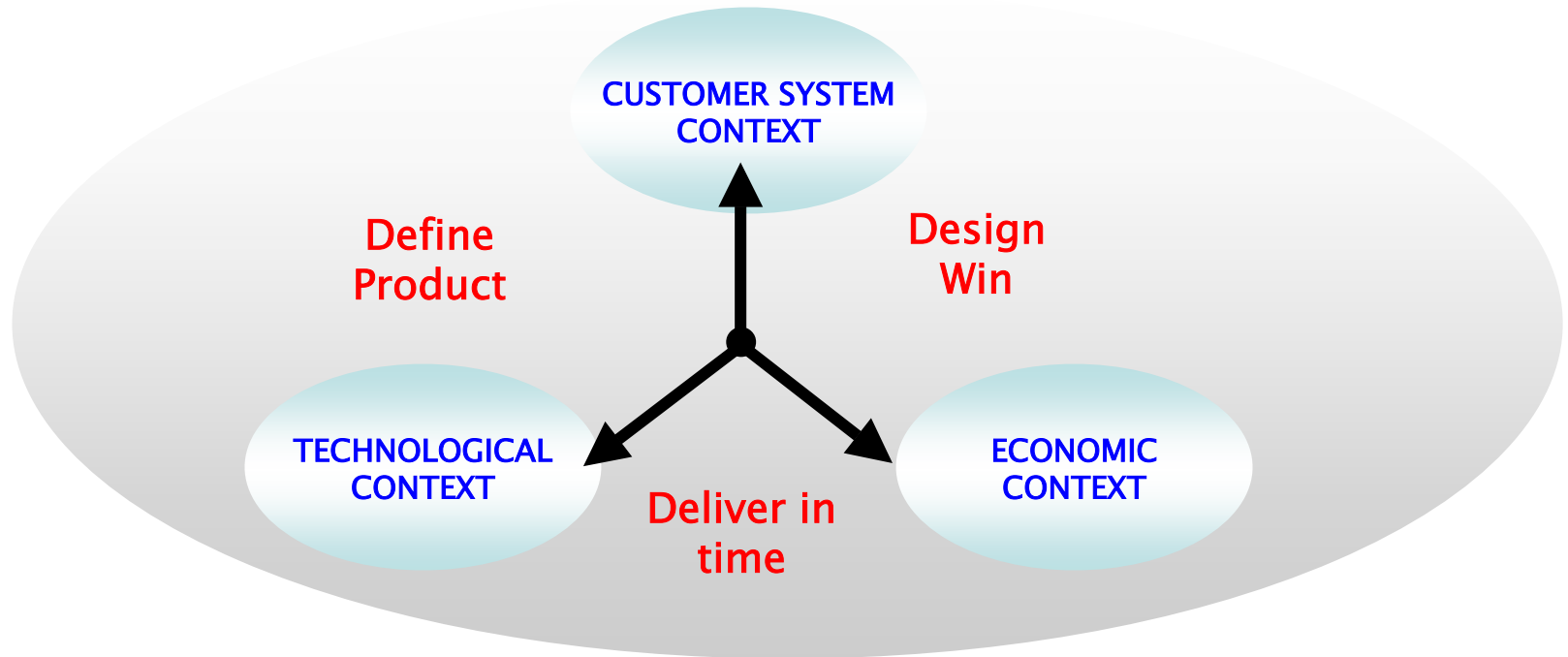
Break Out of Individual Contexts into
Company Contexts



Demystify Execution

Create The Forward Movement in Your Interaction

Execution Manifests in Forward
Movement Between Contexts



Examples of Forward Movement

- Economic Value Add can be thought of as a manifestation of forward movement

Example: A Hypothetical Products Stock Market

Each ticker = A product under development

$$\text{current value of product ticker} = \text{Economic value add} - \text{fixed budgetary costs}$$

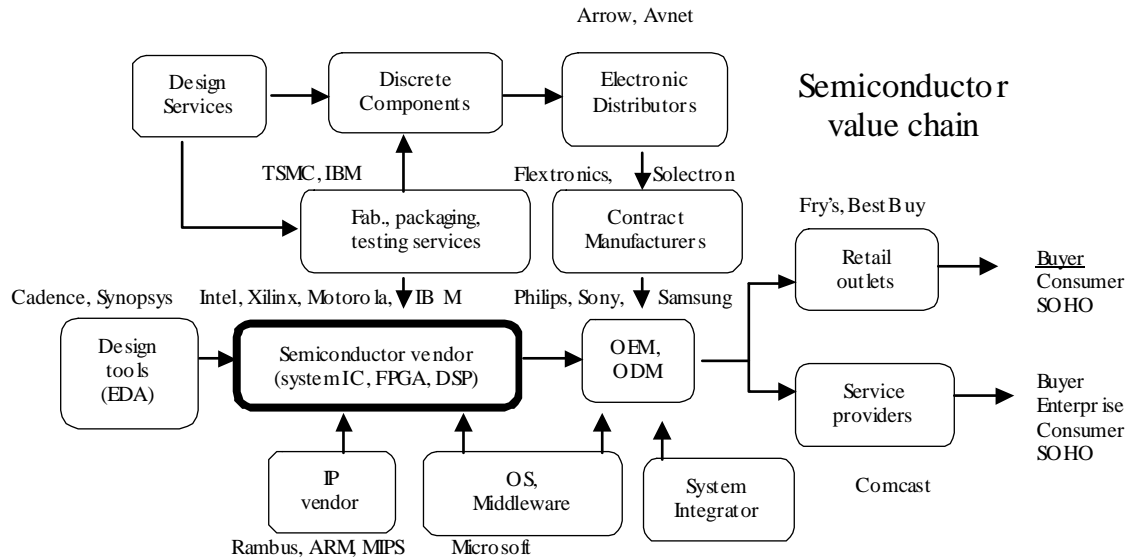
Key to success:
increase this
faster and sooner

Examples of Forward Movement

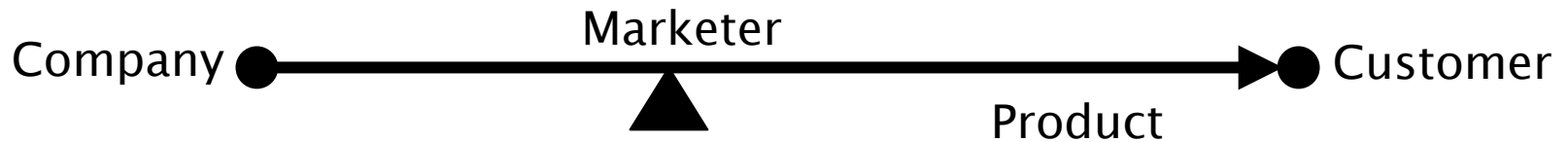
- Self requiring vs. value building features
 - Value building – moves forward
 - Self requiring merely sustains the product, i.e., commodity
- Tasks vs. Tools
 - Tasks remind us of burdens. Encourages hunkering down
 - Instruments remind us of construction, building from ground up, making something from nothing, *creating forward movement*
- And plenty more in the book!

Practical Hints

- Refer frequently to the value chain emphasizing
 - Who sells to whom
 - The margins, so they have a sense of market value, not just how good the product is



Practical Hints



- Marketing is *knowing and articulating the problem*
- Position the roadmap as a blueprint for forward movement to engineers
 - Find a problem, build a product to solve it, go to next problem
 - Succeed in communicating that the engineering group's products are for solving problems

A Baseball Anecdote

A well-known exchange between three baseball umpires:

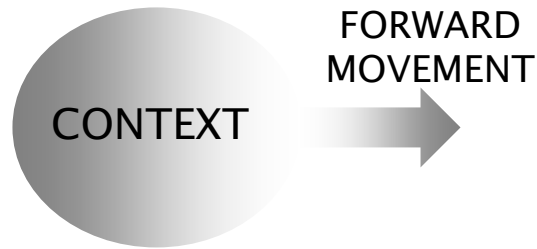
“I call them as I see them,” said the first

“I call them as they are,” claimed the second

“They ain’t nothing till I call them.” disagreed the third.

Until customer agrees, you got nothing!

The Takeaway



- Ask the question: “What actions can initiate the forward movement?” Switch the context.
- Aim to build the skill-sets measured on
 - Contextual experience
 - Contextual decision making
 - The ability to identify forward-moving actions
- Execute them!

What's Covered in the Book?

- An exhaustive treatment of contexts & the phenomenon of differentiation
- A reconstruction of the entire product marketing discipline with this thinking as a backdrop

Thank You!

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These foils were presented by the author at the SVPMA (Silicon Valley Product Management Association), Sunnyvale, California, on March the 3rd, 2005 where the author was the guest speaker. This PDF file can be downloaded from <http://www.hightechcraftbook.slowread.com/>

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