

**EAGLE CIRCUITS**

EXCELERATE TO MARKET



# **NPD Services – A Paradigm Shift for NA PCB Fabricators**

**Nilesh S Naik**  
**March 24<sup>th</sup>, 2014**



## ... Continuing From Our Last Meeting

*Sales won't increase on their own – You need managed CHANGE appropriate for you and your business.*

*Without a proper REACTION to a fundamental change in the industry and how it operates, you can go the way of the dinosaur.*

Yash Sutaria – Alpha Circuit Corporation



... Continuing From Our Last Meeting

***The Only Constant Is Change***

*So Then The Question is How Has  
Eagle Transformed Itself In To An  
NPD Comapny*



# Eagle Circuits Snapshot

- Quick Turn, High Mix, NPD (New Product Development) Shop
- Layout, Fabrication, Assembly, Investments and Partnerships
- Based in Dallas, Texas
- 2013 Revenue - \$6 Million
- 30 Employees



# Eagle Circuits Orientation

- **Service Based** Orientation
  - One Stop Shop
  - Layout, Fabrication, Assembly, Testing, Box Build, and Logistics
  - Always Solving the Customers Problems
  - Flexibility



# Eagle Circuits Mission

- **Own The Quick Turn Space** In Our Region
  - Focus On Local Customers In Our Region
  - We Leverage Our “FedEx” Advantage
  - Engage Directly With Product Engineers
  - Provide Integrated Product Manufacturing Solutions
  - Flexible and Dynamic Scheduling





# Eagle Circuits Approach

- **Conscious Business Model**
  - Focused on delivering value to all of our stakeholders
  - By aligning and harmonizing the interests of our customers, employees, suppliers, investors, our community, and the environment to the greatest extent possible.



# Eagle Circuits Approach

- **Conscious Business** Model
  - Longer Term Outlook, not Quarter To Quarter
  - Focused on Purpose
  - More Committed To Empowering and Pushing Up Our Team
  - Longer Sustainability





# NPD Transformation

- Market Changes
- Operational Changes
- Investing In New Product Development
- Take On More of The Supply Chain
- Ownership Change
- Name Change – Back To Eagle Circuits



# Adapting To Market Changes

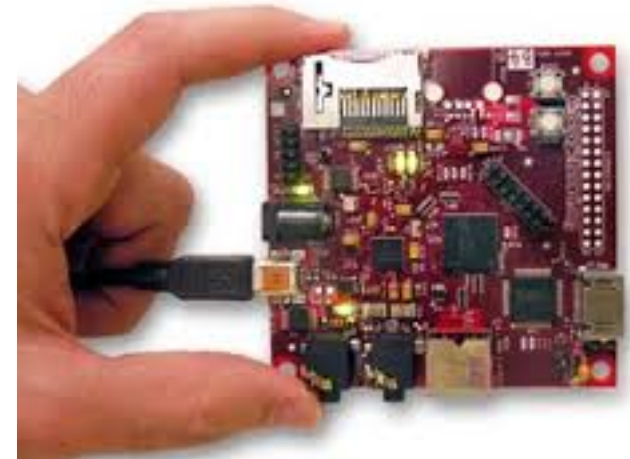
- Multiple Processes
  - One Process Flow For All Is Not Enough
    - Our Behavior is a Function of Class of Service
    - Look at the Airlines Methodology
  - Based On The Risk Assessment
    - No Risk – No Touch, No Test, Web Based - \$
    - Low Risk – Fixed Quotes, Aggressively Priced - \$\$
    - Medium and High Risk – Full Customer Service, With Dedicated Account Managers

Risk Level	No Risk		Low Risk		Medium/ Risk		High Risk	
Process Behavior	Multiple Jobs on a Panel		3 Panels Max		Resource Capacity Constraints		Mfg, Technology, and Quality Constrained	
CAM/Engineering Behavior	None		None		Engaged		Active	
Product Category	Commodity		Commodity				Value Added Services	
Pricing	Unit Price Based on Area Only		Minimum Lot Charges		Min Lot or Unit Price		Min Lot or Unit Price	
Pricing	\$		\$\$		\$\$\$		\$\$\$\$	
Involvement	Sales		Sales		Sales and Production		Sales, Production, Engineering, Quality and Customer	
Quote Turn Around	Instant		Instant		4 Hours		24 Hours	
% of Sales	5%		35%		40%		15%	
Target Quote Win Rate	40%		40%		40%		80%	
Expected Production Yield	100%		100%		90%		80%	
Material Type	Any FR4 Requirement		Any FR4 Requirement		IS406/IS408, Nelco -13, Nelco-13Si, and Rogers 4000 Series		Any Other Material	
Board Thickness	0.062		.031”-.093”		0.010” - 0.187”		<.010” or >.187”	
Layer Count	2 to 6 Layers		1 to 8 Layers		9 to 28 Layers		>28 Layers	



# Adapting To Market Changes

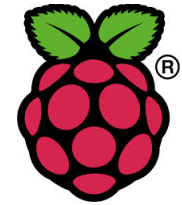
- All Semiconductor Companies Have Introduced Development Platforms





# Adapting To Market Changes

- Creating A Whole New Market
  - Maker and Open Source Community



 [beagleboard.org](http://beagleboard.org)

**Maker Faire**<sup>®</sup>







# Adapting To Market Changes

- Creating A Whole New Market
  - Maker and Open Source Community
  - Mainly DIY'ers and Hobbyists
  - As more “stuff” goes on a chip, the need for complex boards will diminish
  - More mass customization will arise
- This Open Source Community Needs To Be Served





# Adapting To Market Changes

- FabStream
  - Free Layout Software, With Schematic Capture tied into Digikey. Allows anybody to design a board with no initial outlay of cash.
  - Board fabrication is tied directly into Eagle Circuits manufacturing system. Customer simply hits the “RFQ” button, reviews the quote in real time and places the order.



## Investing In New Product Development

- With Product Development Cost Being Substantially Reduced and Open Source
  - More people are developing products
  - More opportunities to invest in product ideas or to become a manufacturing partner
  - Products seem to be simpler


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# Investing In New Product Development



 Ninja Blocks





## Differences Between an NPD Shop and a Contract Manufacturer

Entity	NPD New Product Development	CM Contract Management
Operational Space	Service Business	Commodity (No Product Differentiation)
Target Customer	Engineers & Product Developers	Purchasing & Commodity Team
Time and Location Sensitivity	Very Important	Not An Issue
Primary Decision Factor	Flexibility and Time	Price
Inputs	Messy (Napkin Drawings)	Clean Fabrication Prints
Customer Interaction	Relational Lot of Communication and Collaboration	Transactional RFQ is Put Out, Order is Placed, Product is Delivered
Behavior	Very Solutions Focused Price is not the primary focus, but rather solving the problem is the key to our success, even if that means multiple changes, starts and stops	Rigid and Unable to Accommodate Changes Focused on operational efficiency Any "In Process" changes are highly disruptive "Nickel and Diming" experience

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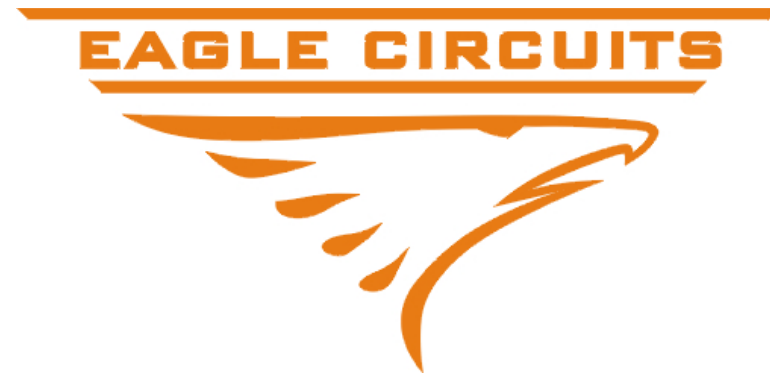


# Thank You

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