New Product Introduction (NPI) and Sustaining Engineering Excellence

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Firstly, Our Profound Gratitude To The Frontline

And Many More….

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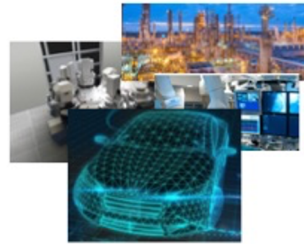
NPI and Sustaining Engineering Challenges

Products are increasingly connected systems (continuous improvement & changes)

Customers demand high quality, safety and reliability

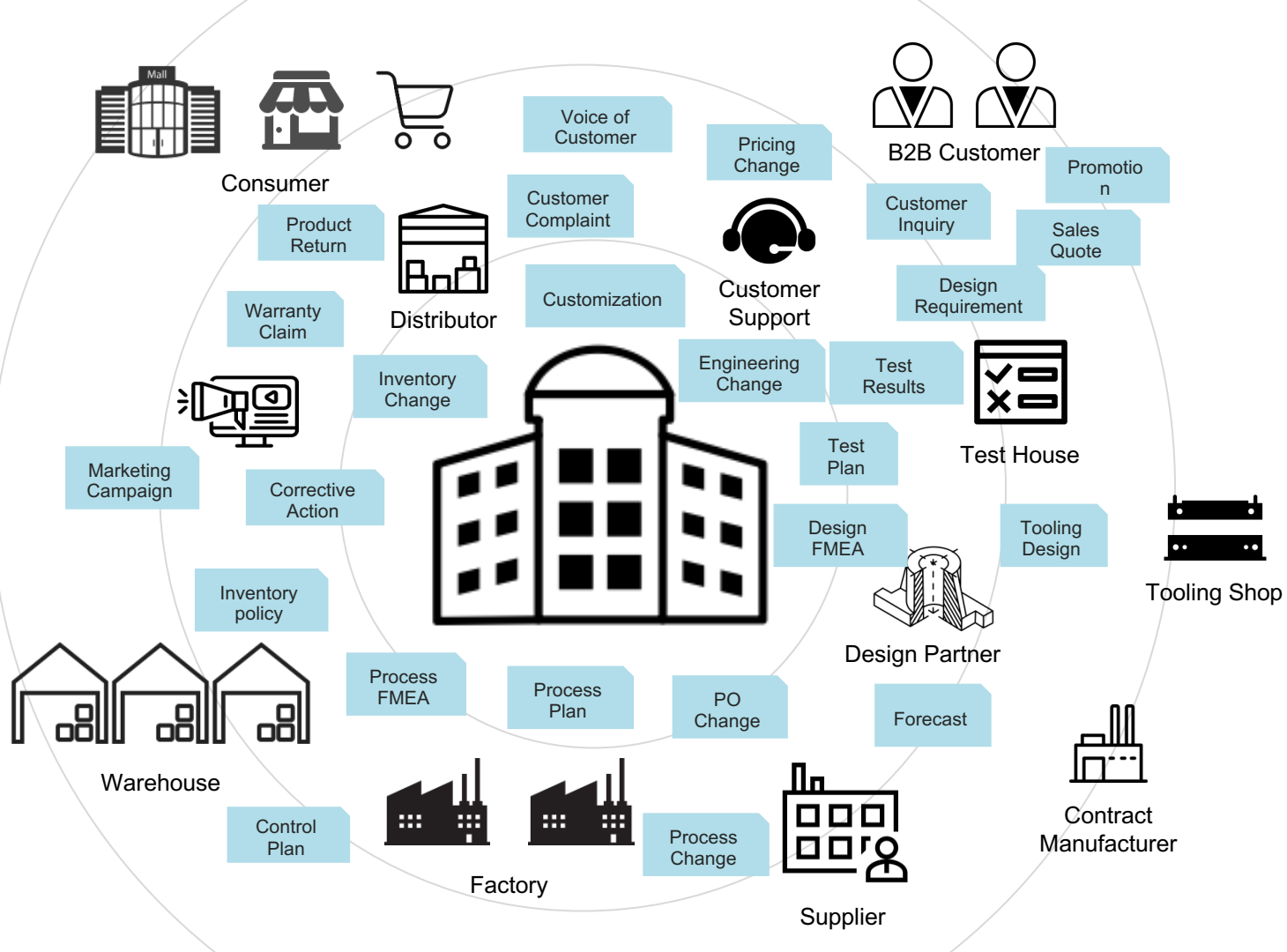Complicated supply chain (with occasional disruptions)

Product life cycles are getting shorter

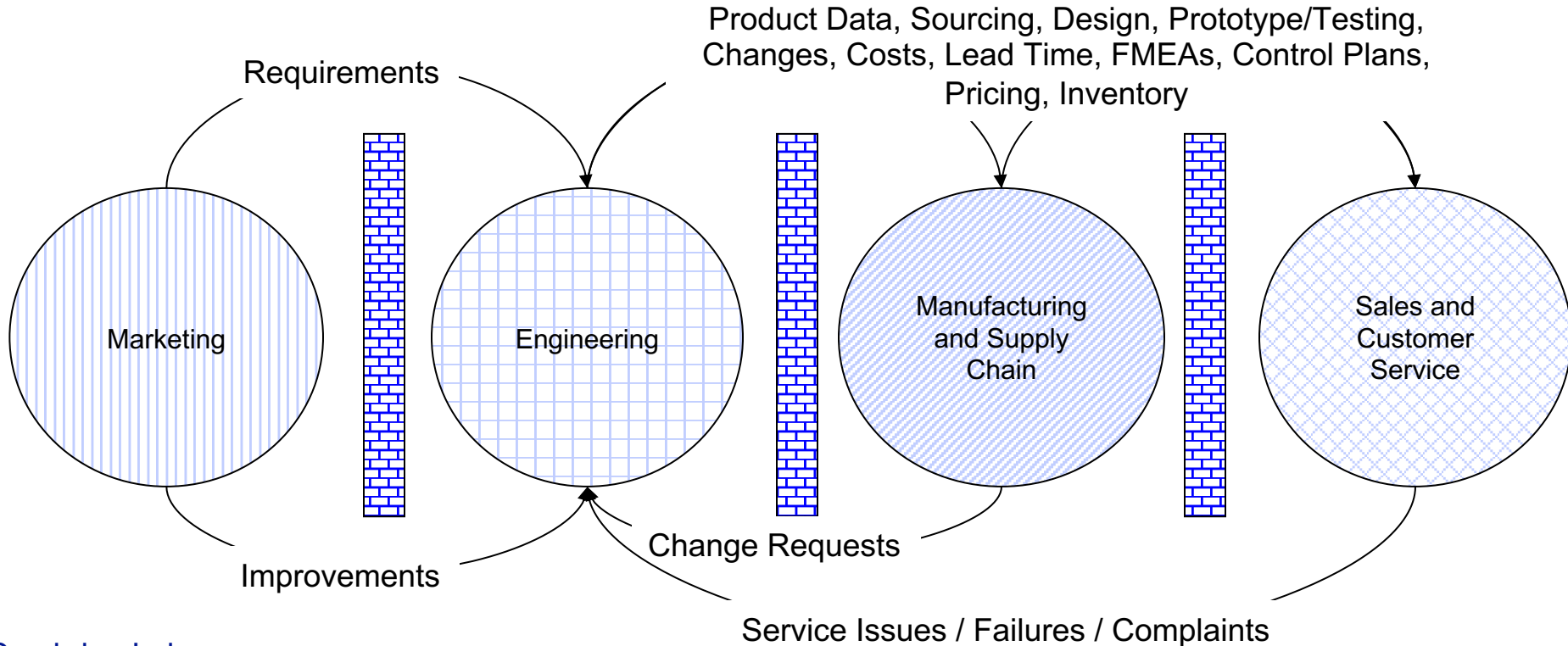**NPI and Sustaining Engineering**
in the
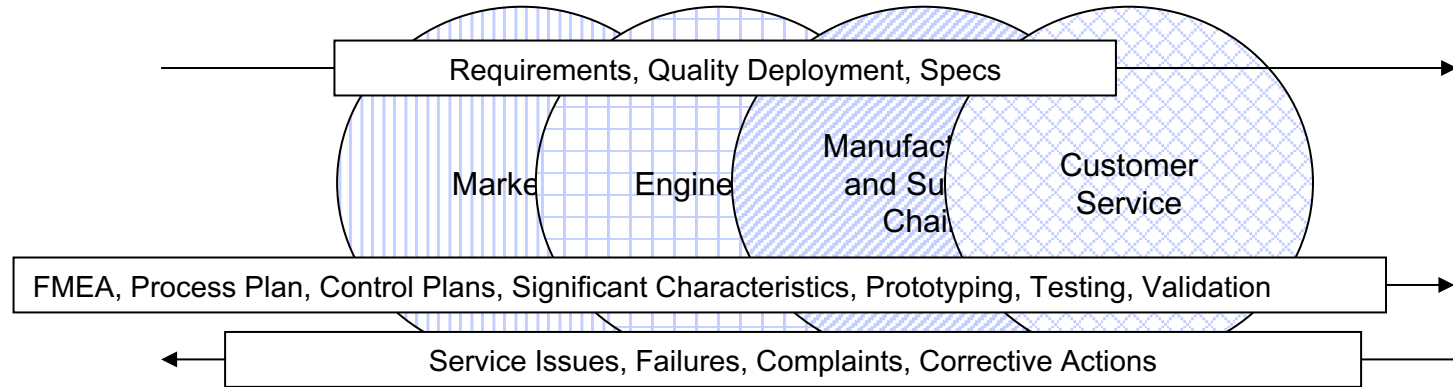Modern Supply Chain

Fast and Dynamic

People-centric

Information Rich

Consumer

B2B Customer

Voice of Customer

Pricing Change

Promotion

Customer Complaint

Customer Inquiry

Sales Quote

Product Return

Distributor

Customization

Customer Support

Design Requirement

Warranty Claim

Engineering Change

Test Results

Inventory Change

Test Plan

Test House

Marketing Campaign

Corrective Action

Design FMEA

Tooling Design

Tooling Shop

Inventory policy

Design Partner

Warehouse

Process FMEA

Process Plan

PO Change

Forecast

Control Plan

Process Change

Contract Manufacturer

Factory

Supplier

Process and Information Silos Continue to be an Obstacle

Requirements

Product Data, Sourcing, Design, Prototype/Testing, Changes, Costs, Lead Time, FMEAs, Control Plans, Pricing, Inventory

Marketing

Engineering

Manufacturing and Supply Chain

Sales and Customer Service

Change Requests

Improvements

Service Issues / Failures / Complaints

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Cross-functional Engineering & Processes in the Supply Chain are Essential

Requirements, Quality Deployment, Specs

Marke Engine Manufact and Su Chai Customer Service

FMEA, Process Plan, Control Plans, Significant Characteristics, Prototyping, Testing, Validation

Service Issues, Failures, Complaints, Corrective Actions

for
Speed to Market
Quality & Reliability
Continuous Improvement

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Keys to NPI and Sustaining Engineering Success in the Supply Chain

Make Supply Chain Integral to

Monitoring progress and visibility

Deploying product and process quality plan

Understanding impact of change and dependencies

Developing comprehensive product and process quality plan

Product Development Speed, Quality & Reliability

Reducing continuous improvement cycle time
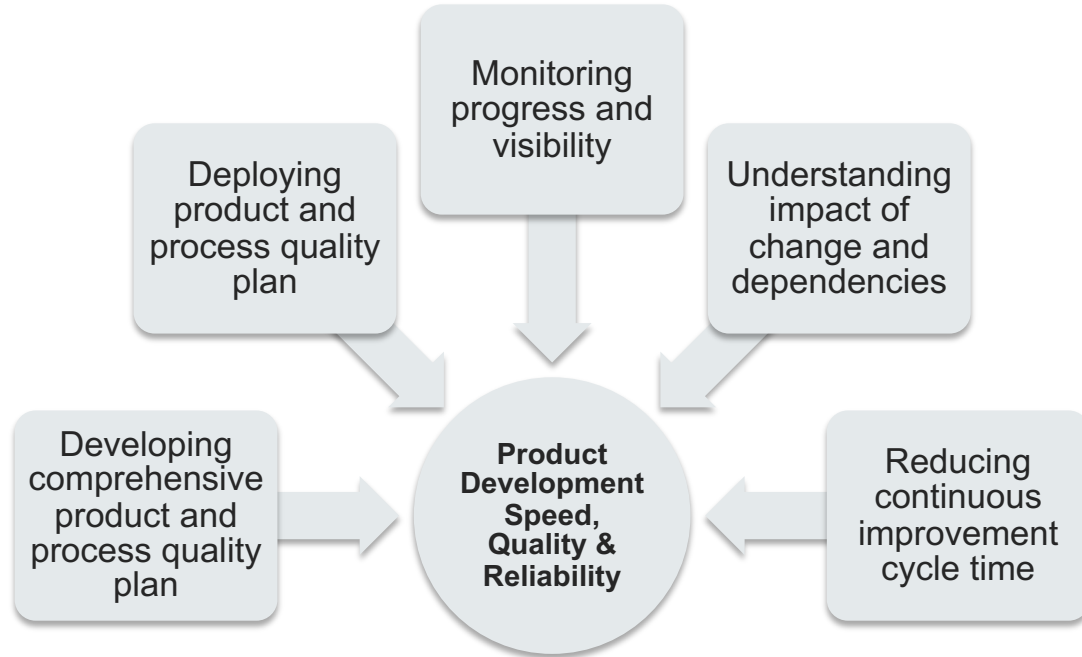
Processes and Techniques Used for Effective NPI and Sustaining Engineering

Concept Initiation and Approval	Program Approval	Prototype	Pilot	Launch
Requirements Management	Design Specification	Process Plan	Production Trial Run Process	Continuous Improvement Processes
Quality Function Deployment	Quality Deployment Plan	Process FMEA	Production Control Plan	Corrective Action Process
Concept FMEA	Design FMEA	Process Control Plan	Measurement Systems Evaluation	Engineering Change Management
Function Trees	Control Plan	Measurement System Plan	Production Part Approval Process	Process Change Management
	Design Verification Plan		Quality Planning Sign-off	
	Test Plan			
	Preliminary Bill of Material			

Feedback Assessment and Corrective Action
Corrective/Preventive Action System, Engineering Change Management

Process and Data
Program Management, Document Management (Drawings, Visualization files), Bill of Material Management, Lifecycle Management

Plan and Define Program	Product Design and Development Verification	Process Design and Development Verification	Product & Process Validation

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Best Practice Scenarios (Built with [ZFlow](#))

Making Suppliers integral to NPI and Sustaining Engineering

Driving NPI program and process with cross-functional teams

Best Practice Scenarios (Built with [ZFlow]())

Information Rich NPI and Sustaining Engineering Processes
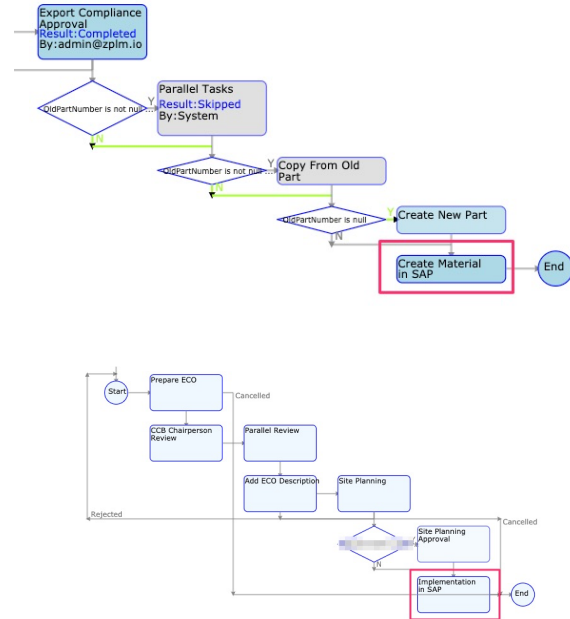
Out-of-the-box Integration of NPI and Sustaining Engineering Workflows to ERP, MES, Planning, CRM systems

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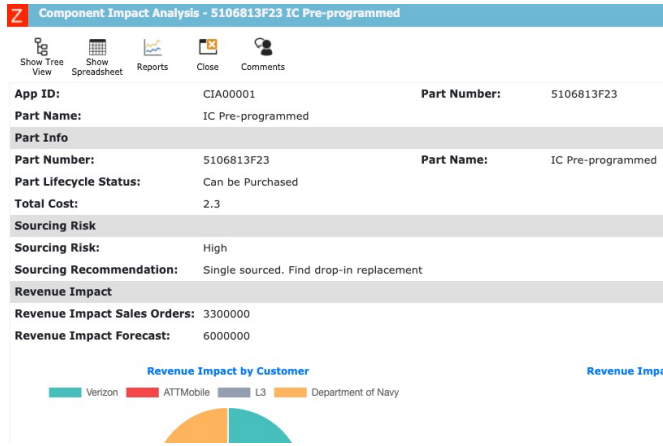# Component Engineering and its Importance (NPI and Sustaining Engineering)

Selection
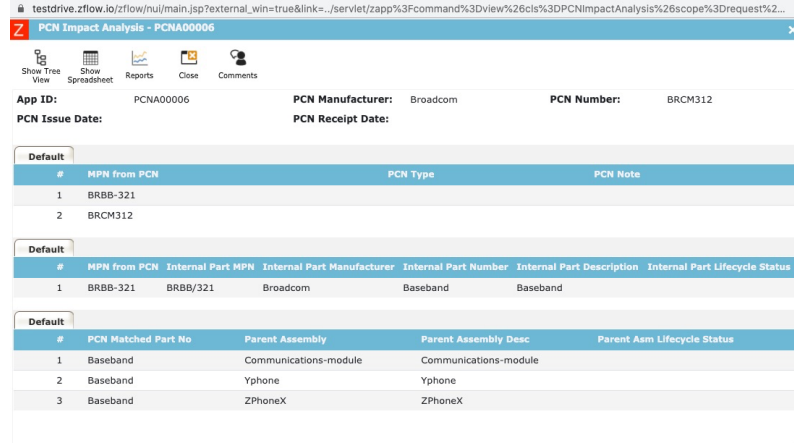(Functional, Process, Quality, Reliability, Lifecycle, Multi-sourcing)

Changes
(handling PCNs..)

End-of-life

Best Practices

Component Impact Analysis
to understand risk and revenue
impact of components

PCN Analysis to intelligently
match PCN parts to Internal
Parts and their impact on
assemblies and finished goods

Component End-of-life Strategies

End-of-life Analysis to analyze and come up with the right strategy when manufacturer parts are going EOL

- Last Time Buy from Manufacturers (requires visibility into expected future volumes)
- Distributors
- Buy the Design and Contract Manufacture
- Essentially buy time and enough have volume until Redesign and Requalification
- Last resort, EOL your product

Get Started Now

Test Drive ZFlow

Free Proof-of-concept

Free Editions on AWS, Azure
of Google Cloud Platform

For More Information

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