

Supplier Development and Supplier Quality Engineering

-

The Practical Path To A Better Supply Chain

About Cambrian Lab

WHO

WE ARE



Team & Mission

Founded by Supply Chain, New Product Development and Enterprise Technology Experts from SAP, Samsung, Siemens, GM, Ford, Applied Materials *to provide **Effective and Practical Solutions for Product and Supply Chain Development***



Expertise

- New Product Development/Introduction (NPD/I), Supply Chain Management and Logistics
- High-tech, Automotive, Semiconductors, Medical Device..
- Enterprise and Supply Chain Technology (ERP, SCM, Manufacturing, CRM, Sourcing, Finance)

WHO

WE SERVE



Industries

Automotive, High-tech, Semiconductor Equipment, Medical Devices, Consumer Products
(From Fortune 100 to Start-ups)



Our Offerings

- **ZFlow** – Digital Workflow for the Product Supply Chain
- **Cogence** – Collaborative Product Development for High Quality, Safety and Reliability

WHERE

WE ARE



US Locations

SF Bay Area, Boston, Detroit



Implementation and Referral Partners

United States | Asia-Pacific

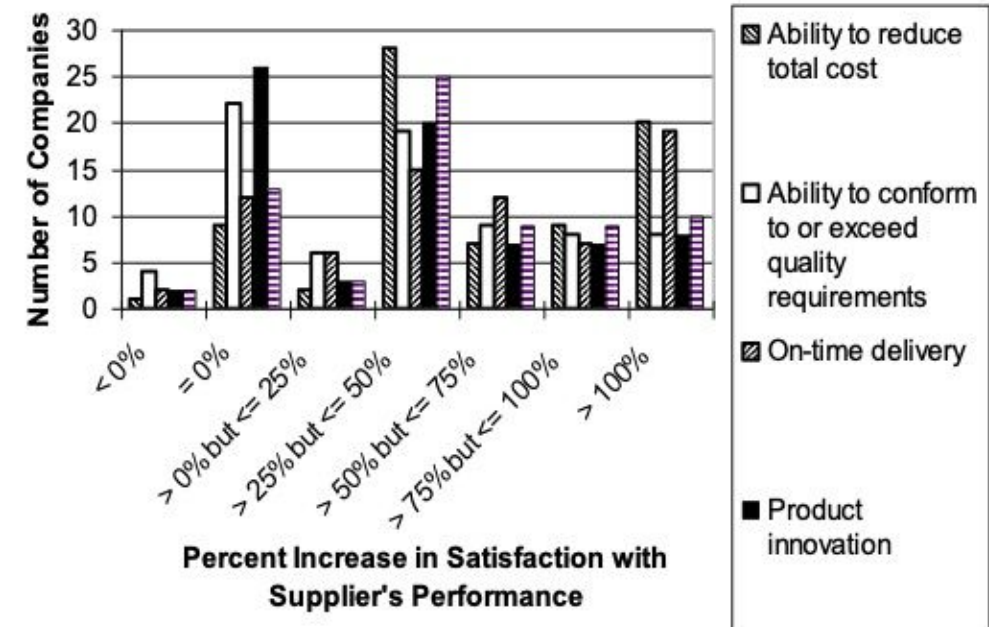
The Business Case for Supplier Development

Figure 2 - Supplier Development Results

Krause, 1997, Survey of 527 firms
Respondents: NAPM members

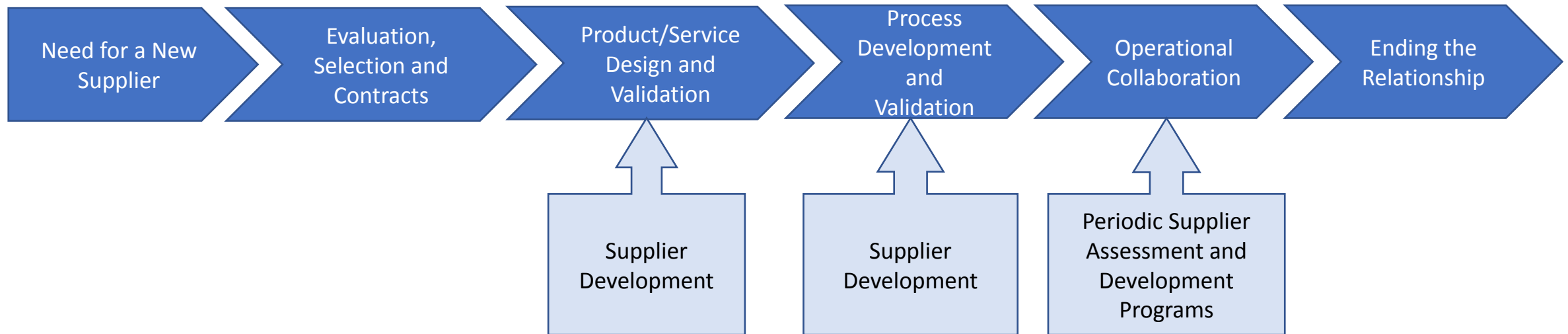
Criteria	Before Supplier Development	After Supplier Development
Incoming defects	11.65 %	5.45 %
% on-time delivery	79.85 %	91.02 %
Cycle time (from order placement to receipt)	35.74 days	23.44 days
% orders received complete	85.47 %	93.33 %

Figure 3 - Satisfaction

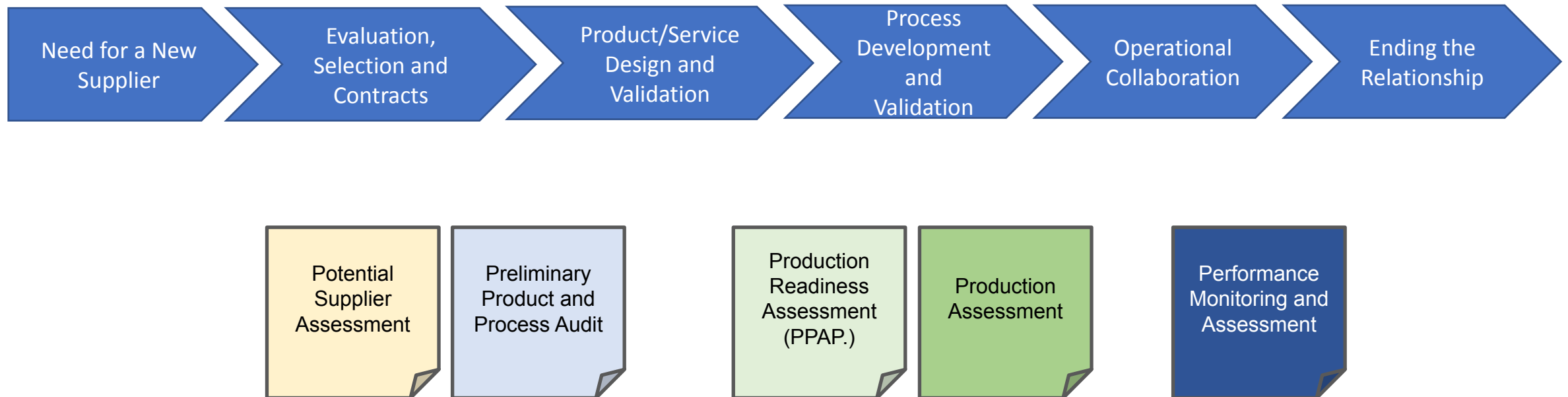


Source: Executive report of key results of recent research on supplier development strategies and outcomes – Dr. Robert Handfield

Supplier Development at Different Stages



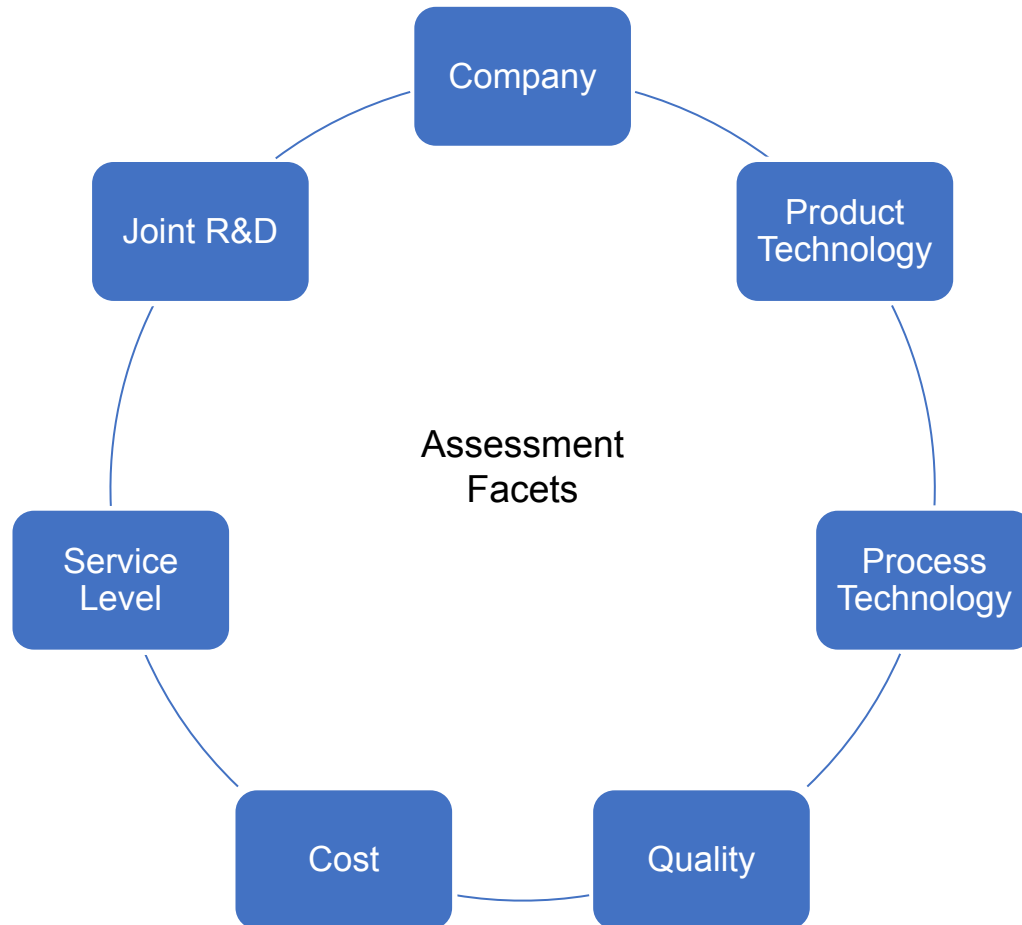
Different Assessments at Different Times



Supplier Lifecycle Stages

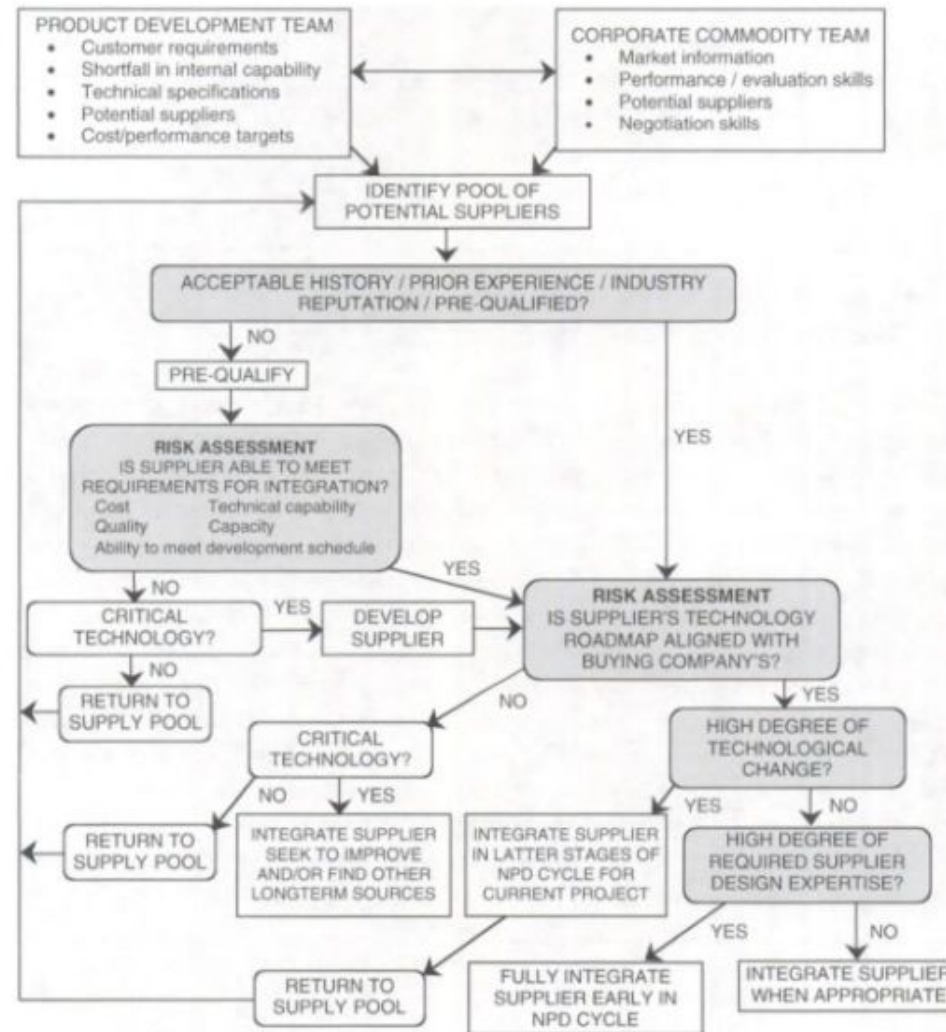


Evaluating and Selecting New Suppliers



Criterion	Buyer's weighting 1=low, 2=medium, 4=high	Degree of fulfillment 1=low, 2=medium, 4=high	
		supplier A	supplier B
Product technology	4	2	4
Process technology	2	4	2
Acquisition and additional costs	2	2	1
Delivery and payment terms	1	2	4
Service level and delivery reliability	4	2	4
Short lead times in flow of goods	2	4	2
Capability for custom production	1	4	2
Capability for joint R&D	2	2	4
Financial stability	4	4	2
Importance of buyer rather low	2	4	1
International support	2	4	2
Total score (number of points) Max. = 104 (= 26·4)		78	70
100% minus gap Max. = 100%		75%	67%

Supplier Selection and Integration for NPD



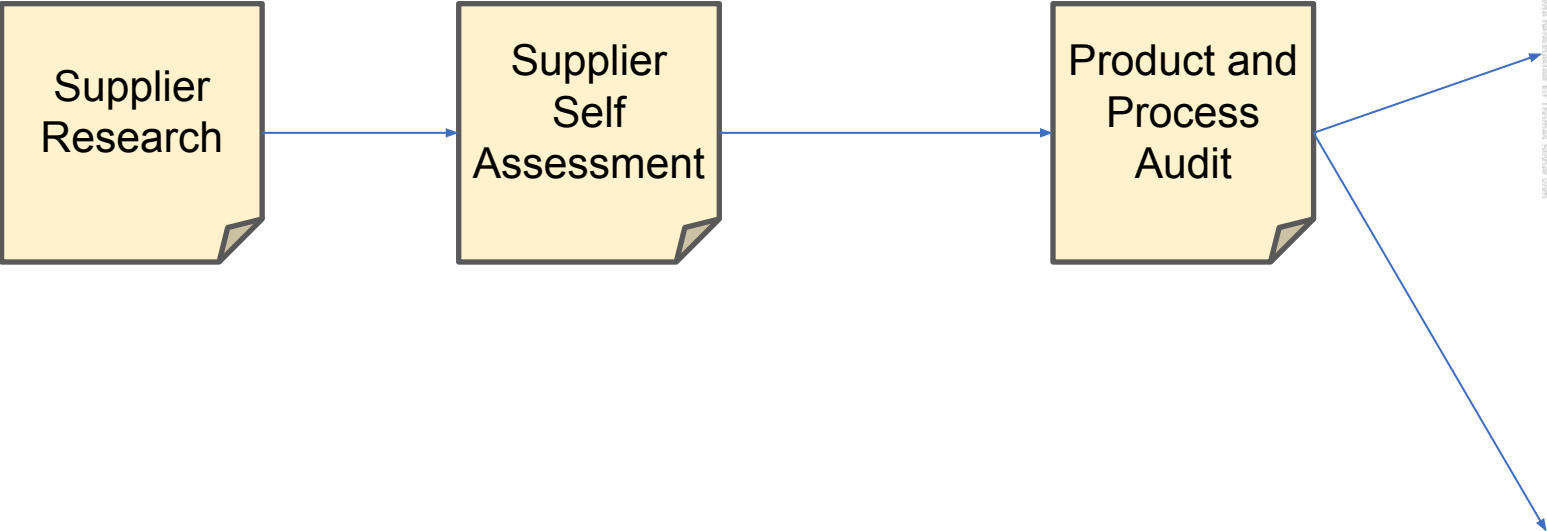
Source:

Supply Chain Redesign: Transforming Supply Chains Into Integrated Value Systems

By Robert B. Handfield, Ernest L. Nichols, Jr.

Figure 6-3 Process Model for Reaching Consensus on Suppliers to Integrate into New Product Development Project

Research, Assessment and Audits for Evaluating and Selecting New Suppliers



IATF, VDA, ISO 13485..

P2	Project management
2.1	Is the project organisation (project management) established and are tasks & authorities specified for the team leader and team members?
2.2*	Are the resources required for the project development planned and available and are all changes displayed?
2.3	Is there a project plan and has this been agreed with the customer?
2.4	Is change management in the project ensured by the project organisation ?
2.5*	Are the responsible personnel within the organisation and in the customer's company involved in the change control system ?
2.6	Is there a QM plan for the project ? is this implemented and monitored regularly for compliance ?
2.7*	Is there an established escalation process and is this implemented effectively ?
P3	Planning the product and process development
3.1	Are the product and process-specific requirements laid down ?
3.2*	Has manufacturing feasibility been assessed in a cross-functional manner, based on the requirements which have been determined for product & process?
3.3	Are there plans for the product and process development ?
3.4	Have the necessary resources been taken into account for the product and process development ?
3.5	Is QM planning arranged for sourcing bought-in products and services ?

FOOD AND DRUG
ADMINISTRATION

GUIDE TO INSPECTIONS OF
QUALITY SYSTEMS

Onboarding New Suppliers

Training

Information

Systems and Process
Integration

Supplier Development

Supply Base and for Individual Suppliers

Supply Base Development

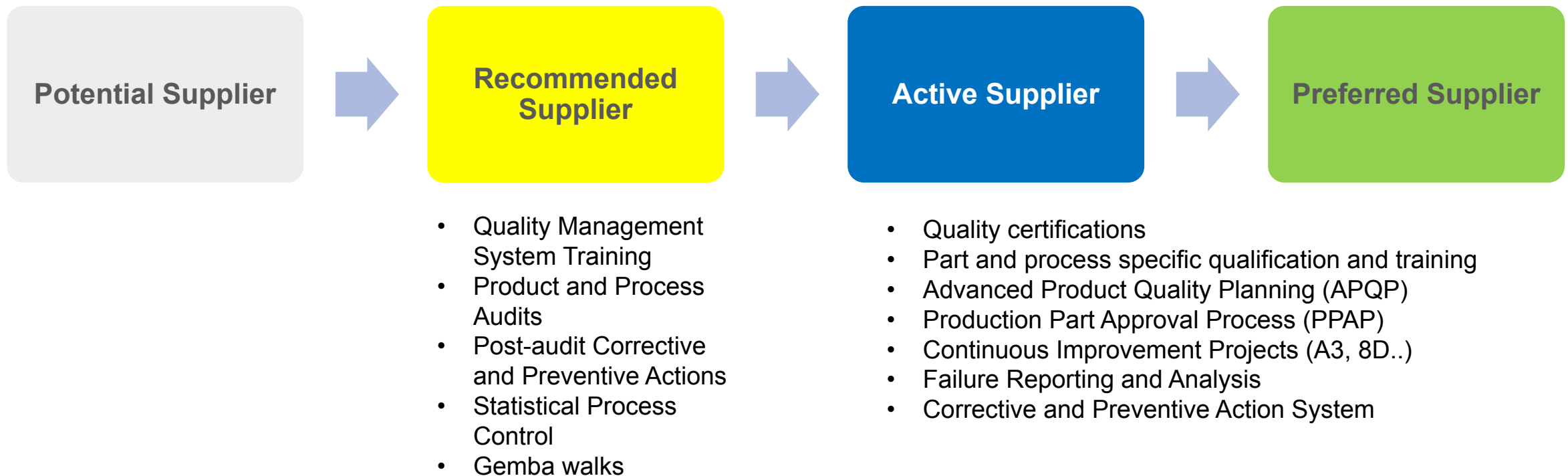
- Commodity specific supply base awareness
- Multi-sourcing
- Quality Management System Requirement and Audits (IATF 16949, ISO 13485...)
- Supplier Councils
- Training
- Supplier recognition and rewards
- Information sharing systems

Individual Supplier Development

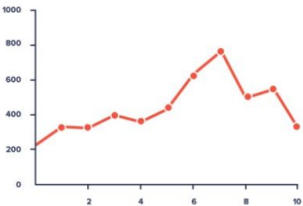
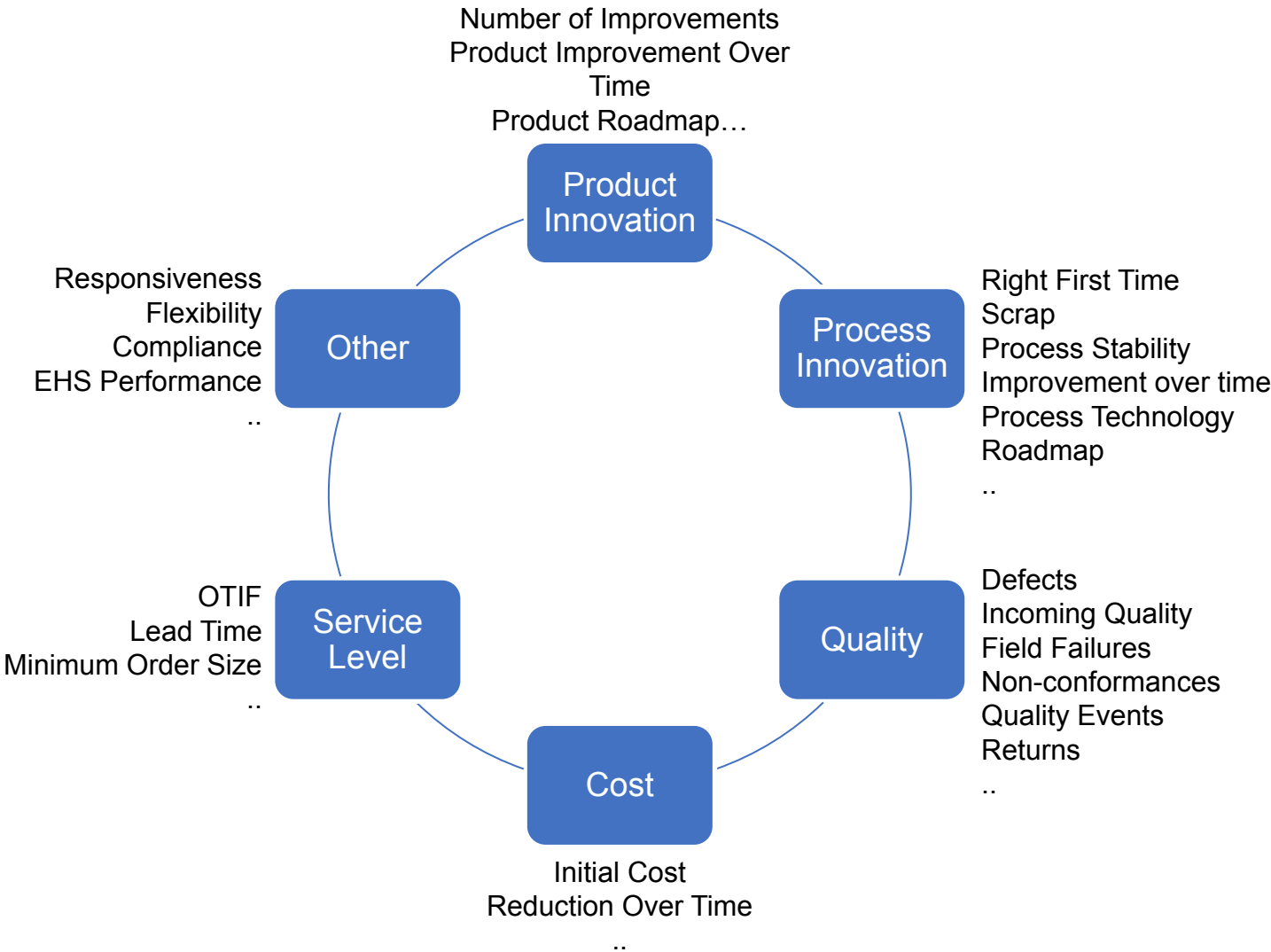
- Tooling and capacity related investments
- Value analysis
- Supplier quality engineering work teams
- Co-location
- Joint improvement activities
- Technology sharing
- Product development collaboration

Supplier Quality Engineering

Key Aspect of Supplier Development

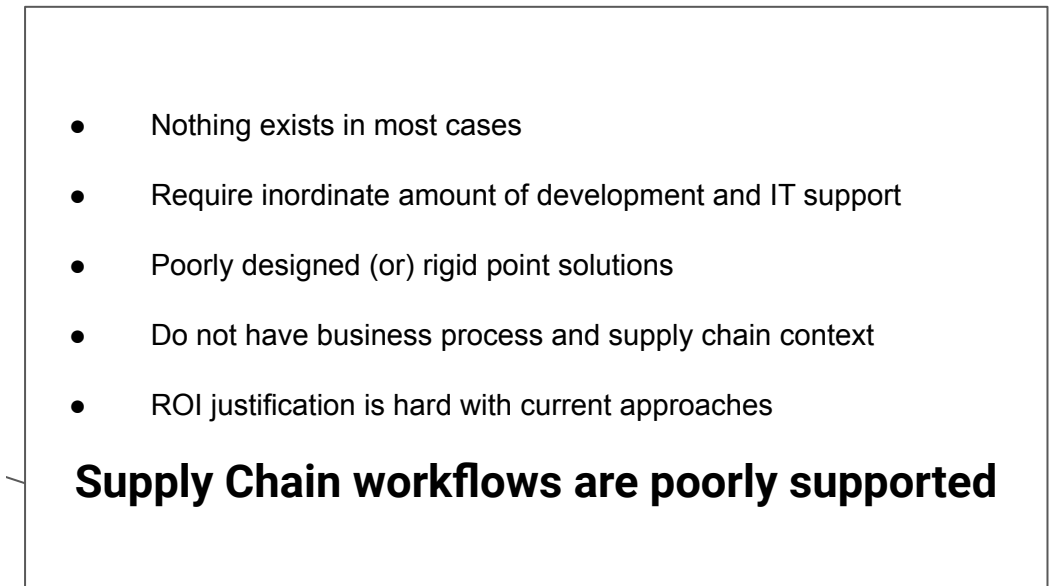
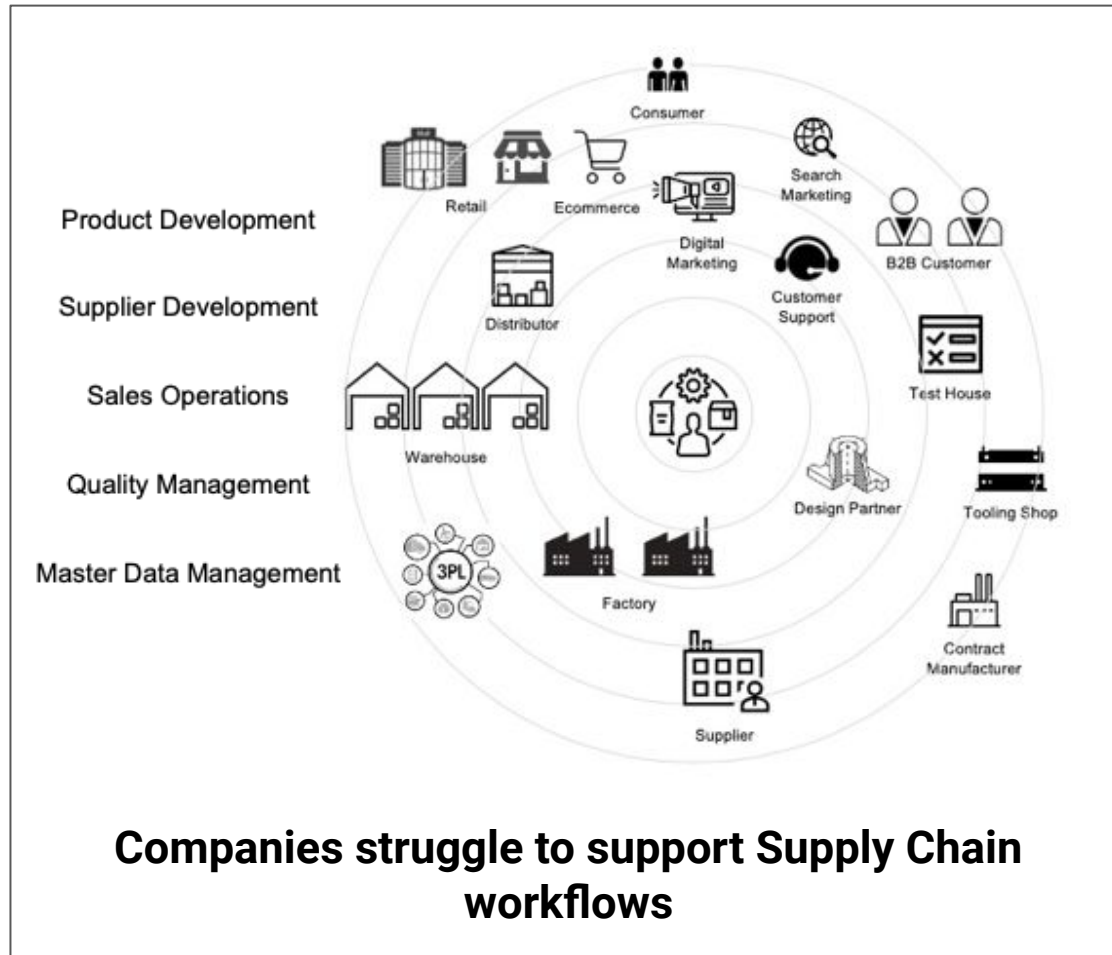


Supplier Performance Assessment



-  A3 Report
-  8D
-  Kaizen Event

Supply Chain Workflows are a Challenge for most Organizations



Effect

Root cause

ZFlow – The Swiss Army Knife of Digital Workflow

Do-it-yourself Workflow

Out-of-the-box Integration to
ERP, CRM, Commerce,
PLM, Supply Chain systems

Zero-code



Involves Right People at
the Right Time

Supply Chain Ready

Ready from Day 1 for
(New Product Introduction, Supplier
Development, Master Data
Management, Sales Operations, Quality
Management...)

ZFlow Digital Workflow Apps for the Modern Supply Chain

Library of 50+ compelling digital workflow apps and growing

New Product Introduction

New Product Introduction
Sustaining Engineering
Component Engineering
Advanced Product Quality Planning (APQP)

Master Data Management

Material Master (Material/Part, BOM, AVL/AML)
Vendor Onboarding and Master Data
Customer Onboarding and Master Data
SKU Lifecycle Management / E-commerce
Maintenance (Equipment, Functional Location..)

Supply Chain

New Supplier Qualification & Onboarding
Supplier Engagement and Development
PO and Forecast Collaboration
Subcontracting Collaboration

Workflow Management

Application Integration



Master Data
Synchronization

Supply Chain
Collaboration

Quality Management

IATF 16949 QMS (Automotive)
ISO 13485 QMS (Medical Device)
Failure Reporting and Corrective Action System
Continuous Improvement (A3 Report, Kaizen Event..)
Supplier Quality Engineering

Sales Operations

Quote-to-cash Process Orchestration
SKU Lifecycle Management
New Customer Onboarding
Ecommerce Channel Integration

ZFlow for Supplier Development and Supplier Quality Engineering



Launch Pad for Administrator

Supplier Analytics

 Supplier Performance

Active(1) | Find | New

Account Maintenance

 Change Supplier Profile

Active(0) | Find | Insights | New

 New Supplier Request

Active(2) | Find | Insights | New

 Create Supplier Profile

Active(0) | Find | Insights

Program Management

 New Construction Project

Active(1) | Find | Insights | New

 New Product Development - Stage Gate Process

Active(1) | Find | Insights | New

 Subcontract Construction Project

Active(1) | Find | Insights | New

 Supplier PPAP

Active(0) | Find | Insights | New


 Supplier Product Development

Active(2) | Find | Insights | New


 Project

List(17) | Find


Purchasing

 Advanced Shipping Notice

Active(2) | Find | Insights | New

 Inbound Delivery

Active(1) | Find | Insights | New

 New Supplier Evaluation

Active(1) | Find | Insights | New

 Purchase Order Collaboration

Active(6) | Find | Insights | New

 Purchase Requisition

Active(1) | Find | Insights

 Supplier Catalog Item

List(4) | Find

 Supplier

List(21) | Find

Verification And Validation


 Design Verification Plan

List(0) | Find


 Traceability Matrix

List(0) | Find

Engineering Change Management

 Engineering Change Order

Active(0) | Find | Insights | New

 Engineering Change Request

Active(0) | Find | Insights | New

Manufacturing Engineering

 Manufacturing Process Change Request

Active(0) | Find | Insights | New

 Control Plan

List(0) | Find

 Process FMEA

List(0) | Find

 Process Plan

List(0) | Find


 Tooling

List(0) | Find


 Measuring Equipment

List(0) | Find


Quality Management

 A3 Report


Active(1) | Find | Insights

 Corrective Action Request


Active(1) | Find | Insights

 Failure Report


Active(0) | Find | Insights | New

 Inspection Report


Active(1) | Find | Insights | New

 Nonconformance Report

Active(2) | Find | Insights

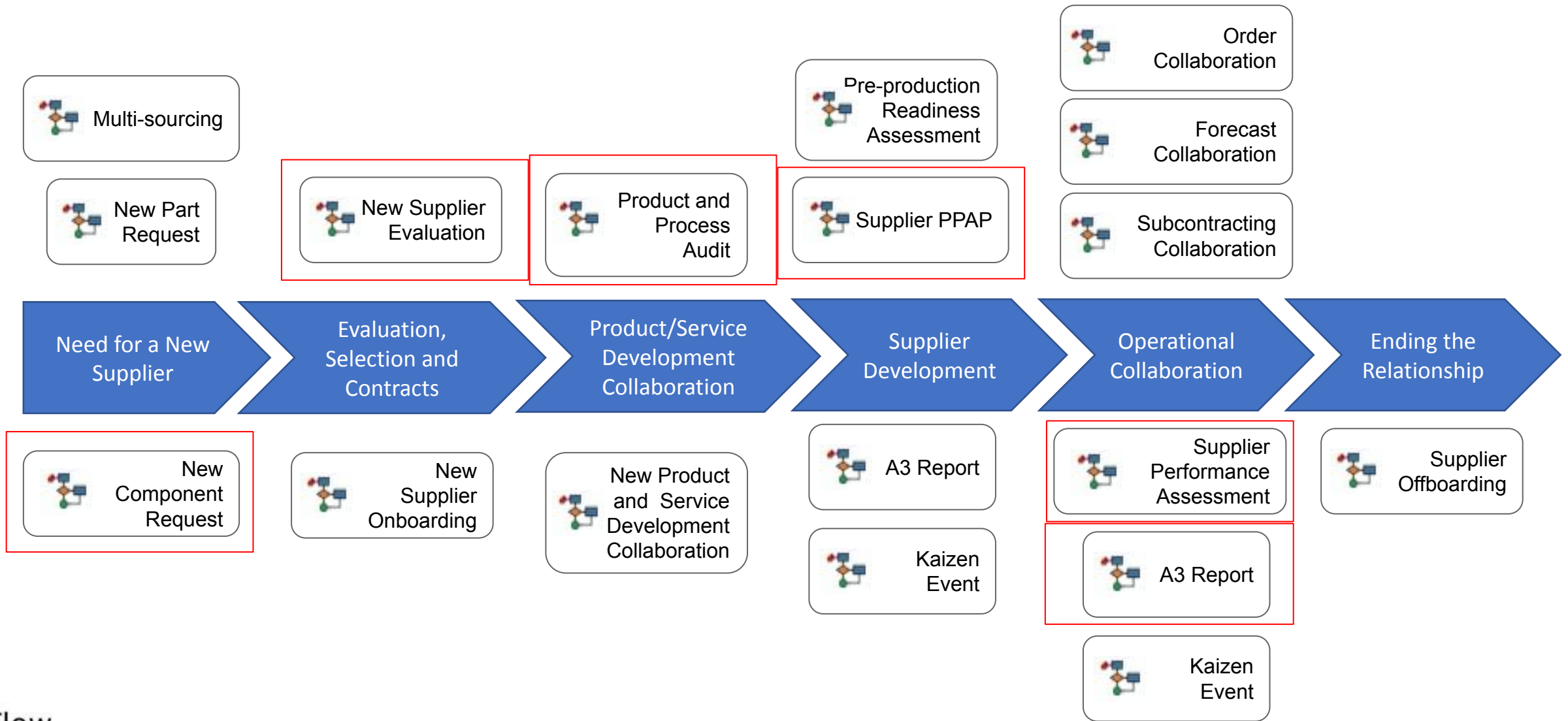
 Quality Issue

Active(0) | Find | Insights | New

 Supplier Audit

Active(2) | Find | Insights | New

Demo



Summary

- ZFlow supports Supplier Development and Engagement in a holistic manner
- Easy to adopt Internally as well as in the Supply Chain
- Easy to get started

[Test Drive ZFlow](#)

[Free Proof-of-concept](#)

Contact Us

Kris Gorrepati

Cambrian Lab

+1-408-569-3744

Kris.gorrepati@cambrianlab.net

<https://www.zflow.io>