Digitizing Continuous Improvement in Automotive Manufacturing

Accelerate the pace of positive change.

KaiNexus

Introduction

The automotive manufacturing industry has entered a period of dramatic change. Customers are buying fewer new vehicles and keeping them longer. There's also a trend toward sustainable vehicles and a new type of competition from ride-sharing services like Uber and Lyft. As a result of transformed expectations, automotive manufactures are looking inward for solutions. For many, the answer will be a structured approach to quality improvement.

Drive Safety, Quality, and Customer Satisfaction

While the concept of continuous improvement is not new to the automotive sector, today's most successful organizations take a modern approach to improvement by deploying software designed to help manage the journey toward perfection.

If your organization is considering implementing technology to support your quality improvement efforts, this guide will help you communicate the benefits and choose a solution that will help you reach your goals.

Table of
Contents

Chapter 1

THE BENEFITS OF QUALITY IMPROVEMENT SOFTWARE

Automotive organizations that deploy technology to support, document, and align quality improvement efforts streamline production and lower costs.

Unite Quality Improvement Across a Diverse Organization

The bedrock principle of quality improvement in automotive manufacturing is that everyone in the organization is responsible for identifying opportunities for improvement. Sometimes ideas for innovation come from the executive team, but more often, they are submitted by frontline assembly workers, floor managers, supply chain supervisors, facility managers, operations supervisors, and others. Inviting input from floor workers allows organizations to implement quality control at the earliest stages of production. The challenge is getting everyone on the same page in a large, diverse organization. Improvement software provides the accessibility, custom configuration, and simplicity that large scale manufacturers need to standardize improvement efforts from the frontlines to the board room.

Assess Effort in Real-Time

The continuous quality improvement approach is centered around daily, incremental changes. Usually, these projects don't require executive-level intervention. With quality management software in place, leaders get a view into how issues like these are being tackled by the team. There is great value in knowing what types of problems are being identified, who is working to resolve them, and how quickly those improvement projects are moving through the pipe.

Align Individual and Strategic Goals

Many leaders go through a strategic planning process, developing a vision for where the organization will be in three to five years. In order to get there, everyone needs to be moving in lockstep and working toward the same game-changing objectives. Quality improvement software sets up the structure for leaders to cascade goals from the c-suite down to the front line. Everyone has a clear understanding of how their work relates to the overall goals, and performance evaluation is driven by those same objectives. When everyone is aligned around the most important purposes, decision making is easier and opportunities for improvement become more obvious.

Build a Culture

Corporate culture is an interesting thing. Every organization has one, even if it isn't intentional. The goal of many leaders is to infuse the culture with improvement-centric thinking and the willingness to engage. This isn't easy because culture can't be dictated. It is the sum of all of the cues people receive about what "normal" behavior looks like. Continuous improvement software serves as a culture dashboard. Leaders can see which people, teams, and departments are embracing the approach and effecting positive change. They can also pinpoint where additional training, coaching, and encouragement are needed.

Underscore the Urgency of Quality Improvement

You probably have software to manage every other important aspect of the business. Sales is likely run on a CRM, the finance team certainly has an accounting system, and there may even be multiple tools running HR. That's because these core business functions are essential and must be well managed. Quality improvement work is no different. When leaders invest in technology, they send a clear signal to everyone that this is not a passing fad or the management mode of the week.

A technology investment gives your team confidence that the organization is willing to put financial resources to work, making individuals successful at managing waste reduction and improvement projects.

Quantify the Impact

Embracing continuous improvement will change the principles on which your organization operates and impact the daily work of every member of the team. Therefore, it is essential that leaders quantify the impact of improvement work and prove that the effort has been worth it.

Improvement management software helps you quantify the results against your organization's key performance indicators like reduced expenses, improved customer satisfaction, higher quality scores, and certifications and awards.

Operate With One Version of The Truth

Email is great as a platform for reminders, but it doesn't give people one place to go for real-time information. Spreadsheets are fine for keeping lists, but they are a passive and easily damaged source for data. Quality improvement management software is an alternative that gives everyone on the team one place to go for the latest updates. Everyone is on the same page because they are looking at the same information, not some email message or file that may be out of date.

Develop a Repository of Knowledge

Improvement software serves as a collection point for all information about opportunities for improvement and implemented projects. Teams can learn from past results and repeat what works and avoid prior mistakes. New employees can quickly come up to speed, and important knowledge isn't lost when people change roles or leave the company.

Achieve and Maintain Certification

Many customers in the automotive supply chain require manufacturers to have IATF 16949 certification. In addition, many manufacturers strive to achieve and maintain ISO 14001 and ISO 45001 certification. Quality management software automates and manages your product, quality, and other documents. It also streamlines your planning, scheduling, and execution of audits.

Chapter 2

Quality Improvement Software Features Checklist

Critical features to look for as you evaluate each solution.
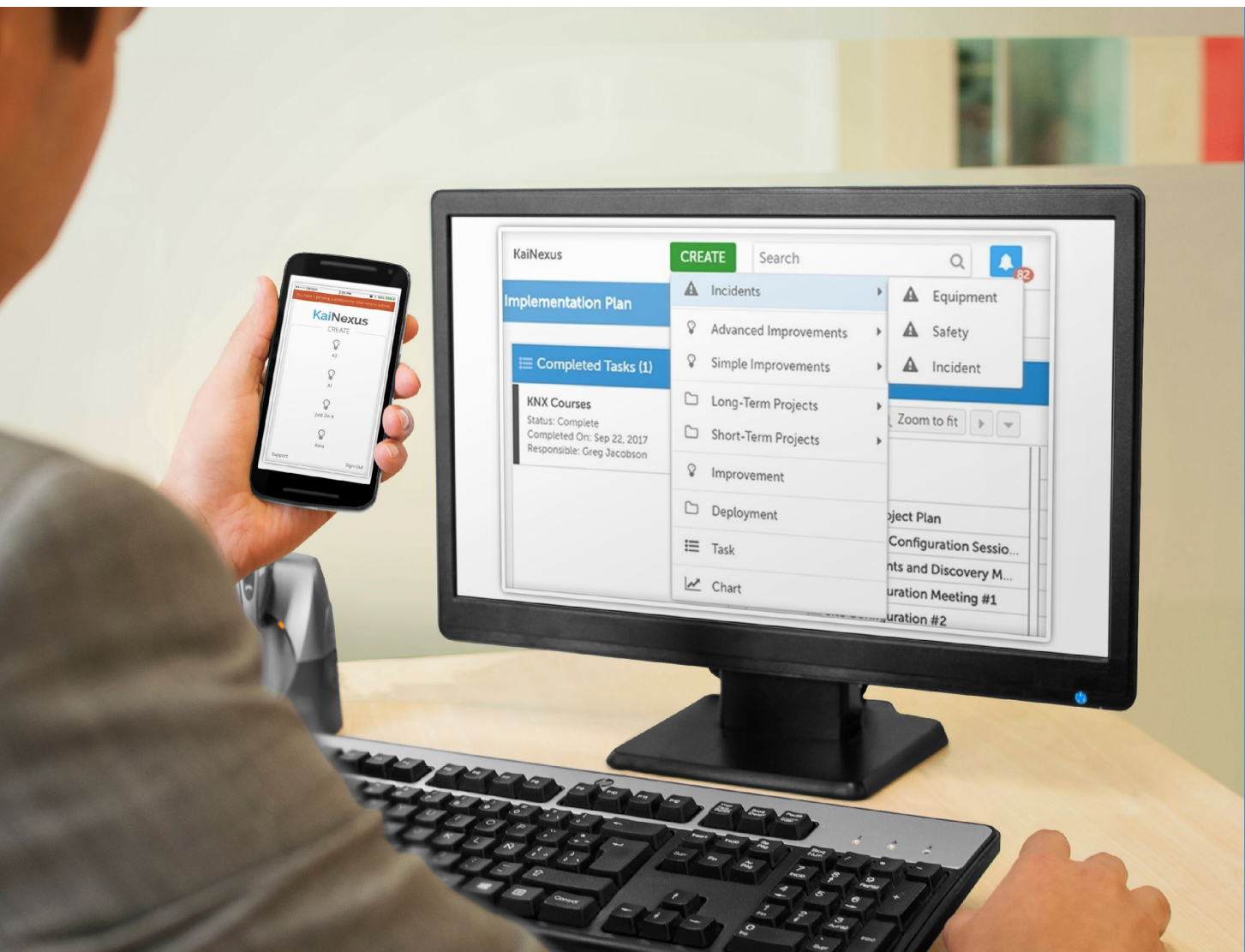
Activity, Engagement, and Impact Reports

One of the most important responsibilities of quality improvement leaders is understanding the health of improvement culture throughout the organization. Improvement software should give instant insight into the people, teams, and departments that are engaged in improvement and calculate the impact of those efforts.

Visual Management

People understand visual information far more quickly than text. A digital platform for visualizing improvement projects and results ensures that people stay connected to the work and each other, no matter what time it is or where they happen to be. Whenever someone needs information about the state of a project or process, it's available on any device.

Smart Notifications

Notifications and alerts via email help keep people engaged and on track with their improvement projects. They let managers know when tasks are completed or deadlines are missed, and it helps ensure that action is taken to sustain improvement momentum.

Strategy Deployment

Improvement efforts shouldn't happen in a vacuum. They should be tied to the strategic goals and objectives of the organization. The best quality improvement management solutions allow the strategy to cascade throughout the organization, so everyone understands how their work relates to the larger goals, including certifications and awards.

Configurable Improvements and Projects

There is no cookie cutter for improvement projects. Different organizations approach improvement work in unique ways, and the path to improvement can vary from project to project. Look for a solution that is flexible enough to meet every need.

Mobile Applications and Kiosks

Improvement work is not confined to the desktop, and your improvement software shouldn't be either. The best solutions on the market offer Android and iOS apps and will work beautifully on tablets or phones.

How can you capture ideas from employees who don't have access to a computer or mobile device on the job?

A quality management system with a kiosk app solves this problem by providing a place for any employee to simply walk up, enter their idea, and get right back to work—no matter where they work or what their job entails.

Cross Functional Collaboration

Many of the improvement projects that have the most significant impact involve cross-functional collaboration. That's because process breakdowns often happen when work is transitioned from one team to another. Choose improvement management software that supports collaboration across functions and unifies the organization on one common platform.

Charts and Views

There are a number of standard charts that are commonly used to measure and track quality improvement activities. The software you select should support all of the following, even if you aren't using them today:

- Control Charts
- Run Charts
- Bar Charts
- Calendar View
- Kanban View
- Huddle Boards

- Pareto Charts
- Goal Charts
- Bowling Charts
- X-Matrix View
- KPI Charts
- Team Dashboards

Robust Search Capabilities

The ability to search the knowledge repository for past projects and documents is essential for ensuring that the information is used effectively to build on past successes or avoid mistakes.

Success Broadcasting

Improvement culture takes off when people celebrate and announce success. Success broadcasting is a feature you'll want to be sure is included in any solution you consider.

Chapter 3

Improvement Techniques

Automotive manufacturing organizations that adopt the continuous quality improvement approach to business management have many tools and techniques at their disposal.

Some organizations leverage these instruments as part of a structured business methodology such as Lean, Six Sigma, or Toyota Kata, while others take advantage of them independently. Software supports them all in various ways and creates a unified platform for all types of improvement work.

PDSA and DMAIC

PDSA (Plan, Do, Study, Act) and DMAIC (Define, Measure, Analyze, Improve, Control) are variations of the cycle for continuous improvement. Each is designed to ensure orderly and effective change.

Software is used to document each step of the cycle, notify team members when action is required, and measure the impact of improvements.

Gemba Walks

The purpose of a Gemba walk is to visit the place where work actually happens and identify opportunities for improvement. The improvements are never made during the walk, only after the walk is over and the proper analysis occurs. Improvement software becomes the home for each potential change that is identified. It guides the process for those opportunities that have been selected for implementation.

Huddle Meetings

Huddle meetings are a fairly ubiquitous practice in organizations dedicated to continuous improvement. Teams gather around a huddle board to discuss projects and help solve problems.

Improvement software digitizes the huddle board, making it possible for people to participate from anywhere, capturing the history of improvement, and helping executives stay connected to the improvement work of all the teams they oversee.

Kanban

Kanban is a technique used by improvement teams to help visualize their workflow and find any interruptions in flow before a backlog forms or grows too big. Digital Kanban boards help make it obvious where work is getting delayed. With this easy insight, managers are better able to take the proper steps to solve any problems.

Standard Work

Improvement software is used to support Standard Work in a number of ways. The process of developing the standard is tracked as an improvement, ensuring that all of the stakeholders are involved. It also serves as a repository for the current Standard. When the Standard needs revision, the cycle begins again.

Value Stream Mapping

Value stream mapping compares the current state to a perfect state in which value is maximized and waste is eliminated. Software that simply digitizes the map does little to support the underlying goal of improvement. Instead, the focus should be placed on features that document, accelerate, and capture the results of opportunities for improvement.

Hoshin Kanri

Hoshin Kanri is a strategy development approach that involves identifying a few breakthrough objectives that can be achieved in three to five years. Software supports Hoshin planning by aligning each person's objectives with the overall strategy in the tool that they use for daily improvement work. This keeps the strategy top of mind.
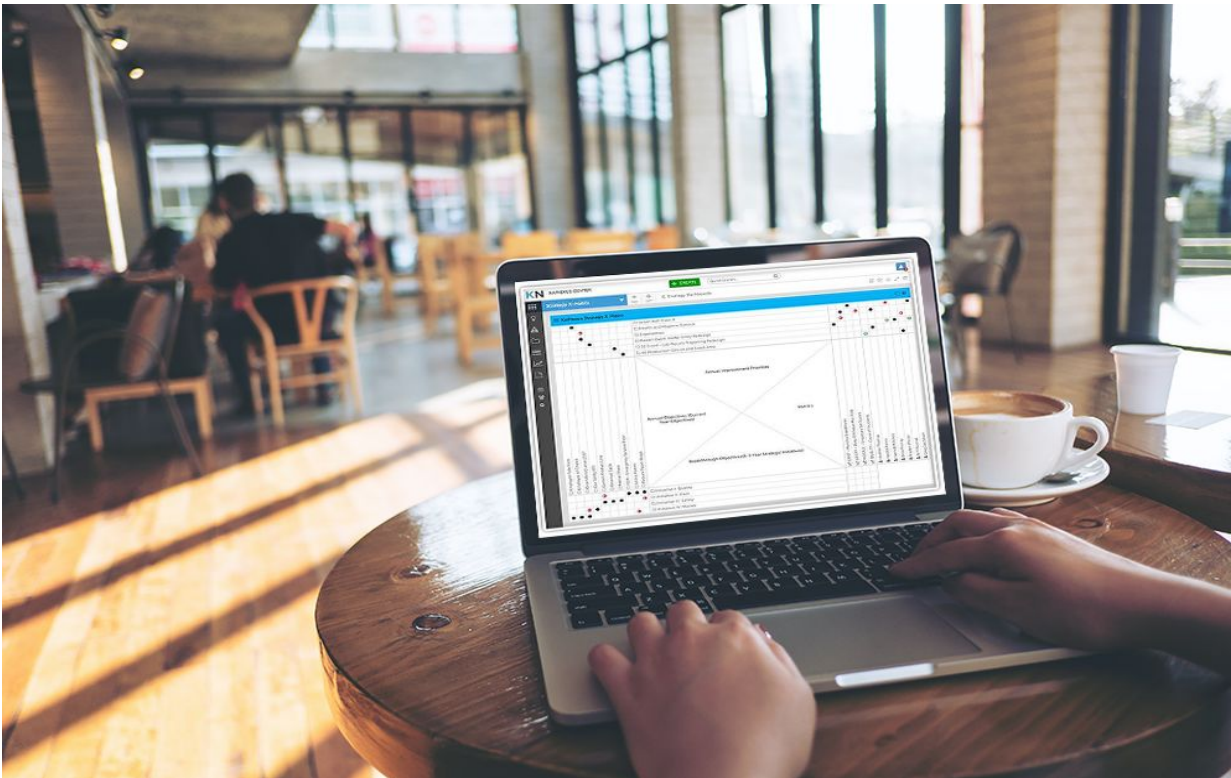
Catchball

The technique of Catchball involves moving ideas and information from one person or team to another, much like catch from childhood but with opportunities for improvement rather than balls. It forms the basis for complicated decision making and policy development. Email is a dangerous place for Catchball because it is so easy for messages to be missed and context to be lost. Improvement software on the other hand is an ideal tool for this kind of back-and-forth collaboration.

Chapter 4

Implementation Guide

As much as we'd like to believe that every automotive manufacturing organization that invests in quality management software is able to successfully implement and fully adopt it, we know it isn't so.

Although many companies are able to rapidly achieve ROI and make quality assurance part of the culture, others struggle to embrace both the technology and the approach. Here's what the successful organizations do right.

Demonstrate Strong Leadership

Continuous quality improvement is more than a tool or a process. It is a philosophy that informs corporate culture. If employees don't see that the approach is supported at the top, they won't embrace that way of thinking, let alone the software that supports it.

Provide Context

If the idea of using improvement management software seems to come out of nowhere, people may see it as a solution looking for a problem. Instead, people should be introduced to the CQI approach and understand what it means for the organization. The software will not be effective on its own, it must be one aspect of a culture that embraces the underlying principle of innovation.

Choose a User-Friendly Solution

Your technology decision will make a big difference on whether employees love or hate your improvement software. Be sure to consider the solution from the employee's point of view.

Can I get the information that is useful to me quickly and easily? Can I access it from the device of my choice? Is the user interface easy to figure out? Can I get help when I need it? Does it fit in with how we operate?

Provide Effective Training

The solution you choose should be easy to use, but that doesn't mean that people don't need to sit down with a knowledgeable trainer or power user to learn how to get the most out of it. Ideally, your solution will be user configurable so that everyone gets the information they need immediately. Setting this up for the first time often requires training or assistance.

Set Individual Goals

What you measure will improve. If you want employees to get engaged with your solution, it is smart to include that as part of how they are evaluated. Set goals related to improvement activities and reward those who achieve them.

Answer "WIIFM"

When asked to do something new, most of us want to know, "What's in it for me?" When employees realize that a primary goal of continuous improvement is to make their work more productive, more enjoyable, and more aligned with company goals, they readily accept and use the tools designed to help.

Quality improvement software is a way to make employee voices heard, streamline work that they are already doing, promote learning, and reduce reliance on non-productive tools like email and spreadsheets. It also helps managers recognize employee achievements and gives everyone a way to document the impact of their contributions.

Demonstrate Value

Smart leaders reference data from the quality management system when they address the organization. They talk about how the data is used to make decisions and share impact reports so that everyone knows this work is making a difference.

About KaiNexus

KaiNexus is the ultimate cloud-based SaaS platform that supports continuous improvement. KaiNexus helps you execute and manage your improvement program throughout the entire improvement journey.

From daily improvement on the front lines to rapid improvement events, Lean projects, and strategy deployment, KaiNexus gives your people a single place and a standard method for capturing improvements. From there, it pushes each idea through to completion.

Features

- Top-Down & Bottom-Up Improvement
- Strategy Deployment
- Multiple User Types Available
- Visual Management
- Impact, Activity, and Engagement Reports
- Intuitive Charts and Data Tracking
- Smart Notifications
- Email Submission
- Configurable Improvements & Projects
- Class & Certification Tracking
- Cross-Functional Team Collaboration

Support

- Dedicated Account Manager
- Onboarding Configuration & Support
- Email & Phone Customer Support
- Online Support Documentation
- Video Training

Technology

- Data Encryption
- SSL
- iOS and Android App
- iPad and Android Tablet Enabled
- Robust API Capabilities

Organizations from all industries in every stage of the improvement journey use KaiNexus. Their unifying commonality is that they recognize that continuous improvement is vital to the success of their organizations and like with all other complex businesses processes, they need a platform from which to manage it. They work to engage their entire organization in improvement and value the ideas and opinions of their frontline workers. Our customers strive to develop the methodologies and leadership behaviors critical to developing an improvement culture, and they understand that software helps support those elements.

If this sounds like you, KaiNexus would be a good fit for your organization. Contact us to learn more.