

# **2010 Center for Automotive Research (CAR) Management Briefing Seminar - Norm Bafunno**

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**Traverse City, Michigan**

**Norm Bafunno, President Toyota Motor Manufacturing Indiana, Inc.**

Good morning everyone.

And thank you for that kind introduction, Jay. I'd like to thank you and the Center For Automotive Research for inviting me today. I'm honored to speak with such a distinguished group of world-class manufacturers at a world-class event. I have enjoyed listening to our first five speakers and look forward to hearing from the others.

About three months ago, Ted Agata, president of our North American manufacturing and engineering operations told me some exciting news. I was going to be named the first American President of Toyota Motor Manufacturing, Indiana. It was exciting news because the Indiana plant was where I began my Toyota career 13 years ago – from the very beginning of production. Toyota Indiana is near and dear to my heart.

This assignment is truly an honor for me and my family. And I find it humbling to be selected president by my peers. Together, I grew with team members and the community. To see the plant transform Southwestern Indiana has been an unbelievable experience.

Yes..... Those were the good times! But our Indiana plant has had its challenges. High fuel prices, a shift to smaller, more efficient vehicles, and the downturn in the economy had a significant impact on our team members, their families, suppliers and our community partners. And while these challenges linger for Toyota, our communities and the industry, there are great expectations for the future.

To better utilize our Indiana plant, we implemented several significant changes over the past 12 months including:

- Adding the Highlander small SUV to the Sequoia line. A massive undertaking considering the Highlanders are a unibody chassis and the Sequoias are frames. Tundra production was consolidated to Texas to optimize utilization.
- And earlier this year, we began production of the all-new 2011 Sienna minivan. Preparations for this changeover began last summer and I'm happy to report that we are exceeding our internal quality targets, demonstrating that Built-In Quality is involved in every process.

...I BELIEVE IN MANUFACTURING..... it is what makes a region, a state, a country, and a society prosperous. And my commitment and focus is on developing our Indiana team members and identifying the next generation of leaders.

As you may know, manufacturing at Toyota, defines our culture and our philosophy under The Toyota Way of:

- Continuous improvement, and...
- Respect for people.

And from my 27 years of experience in this global manufacturing environment, we are facing hyper-competition. My choice of the prefix 'hyper' is to convey an urgent, extremely challenging, environment.

...And doing more with less is a must in our business. I'm fully confident that we can always improve and continue to succeed in this environment through the efforts of talented people, and most importantly, through innovation and change.

Toyota is never satisfied with where we are.....And we're always working to improve. We do this by putting new ideas forward and working to the best of our abilities.

We respect all stakeholders and believe the success of our business is created by individual efforts and outstanding teamwork. I'd like to share a story about The Toyota Way and how it impacted my decision-making skills during my early Toyota days.

I feel, the values of corporate culture are demonstrated best, by the actions of senior leaders. Back in 1998, Dr. Shoichiro Toyoda made his first visit to TMML. You can imagine the excitement and nerves we all had hosting his floor review and comments. He only wanted to sit in a conference room for 5 min and then we were off the floor. The first stop was plastics where TM kaizens were shared. In coaching way, Dr Toyoda asked questions to determine the 'true' root cause. And within a couple of minutes, we were off the route and walking to the plastics paint oven. He had seen some good dirt reduction kaizen at another plant and wanted to share that with our team. Needless to say, it demonstrated, the senior level detailed understanding of a manufacturing environment, and the need to link with our other plants. Having the senior most executive introducing ideas demonstrated what we call genchi genbutsu.. or go and study.

...and this type of visit was not an exception. This opened my mind to The Toyota Way. Soon, I began to ask others: not just the result of a kaizen but what was learned from the process....that was the key.

In my opinion, this experience helped advance my career at Toyota. And we're now implementing other methods to stimulate team members for ideas and innovation.....in turn.....developing their mindset under The Toyota Way.

Today, I'd like to discuss how we're developing talent at Toyota and how we're becoming more autonomous or as we call it Shop Self Reliance, or S-S-R. I will start with the background leading to S-S-R...Its structure, including: Daily operations, People development, and...Model change.

And finally, I'll provide you with a summary showing some of the results we have achieved thus far. Let me briefly explain SSR and its concept.

Back in 1988, Toyota's North American manufacturing footprint contained four facilities. Two were wholly-owned assembly plants in Kentucky and Ontario.

Today, we have 13 manufacturing facilities across the continent.

Immediately following the consolidation of our manufacturing and engineering operations in 2006, our North American leadership group recognized:

- The need for Greater autonomy;
- The need to increase our competitiveness on a regional and global scale;
- And the need to standardize plant and shop activity.

You see, each plant had its own set of standards. We knew that establishing a set of best practices across our operations would lead to better performance in safety, quality, productivity and cost.....and importantly,

develop our team members.

Thus, the idea of Shop Self Reliance was born.

And even though sales were robust for Toyota, we recognized the need to further improve and streamline our operations.

At Toyota, there's always room for improvement.

Some of you may be familiar with Toyota's "Mother Plant" concept. Let me quickly explain. When we first started producing vehicles in North America, they were vehicles such as the Camry and Corolla. As a result, the mother plants produced similar vehicles and were based in Japan. The mother plant would provide the knowledge and know-how of building top quality vehicles. The local plant relied heavily on its mother plant for guidance.

However, when we started developing and producing regional vehicles, such as the Tundra, Tacoma, Sequoia, Sienna and others no plants in Japan had experience building these specific vehicles.

So, our current situation was to utilize local plants. For example, our Indiana plant was the mother plant for Texas, who now produces the Tundra and Tacoma. And Kentucky has been named the mother plant for our newest plant in Mississippi.

Not only will communication be swift, but we can dispatch our team members for training and development opportunities and focus our efforts on S-S-R best practice activities.

Here's a look at S-S-R North American structure. Mr. Ted Agata, our president, leads the effort. The structure is a matrix concept and is made up of the nine shops you see here, including assembly and paint.

But most importantly, the efforts are led by a cross section of vice presidents at our North American plants. They are color coded to visualize the represented plants.

Here's a more specific example of the paint shop organization. It has a vice president as a leader. In fact, when I was vice president, I was the paint leader. Three general managers and a dozen managers from multiple plants across North America make up the team.

By having multiple plants represented under this structure, it provides us with diverse experiences and a platform to quickly share and implement ideas. Communication and information flows freely and a support system is in place where gaps exist.

Now, let's turn our attention to the elements of S-S-R. They are: Daily operations; Model change...and...People development.

It's important to note that these three elements overlap with one another. There are many examples of how they integrate. For example, model change has an impact on daily operations. You see, we utilize model change data to make any necessary adjustment in our daily operations.

Let's begin with Daily Operations. As seen on this chart, we have identified specific Key Performance Indicators – K.P.I.s – for each of the nine shops I discussed earlier. Our use of K.P.I.s allows us to set goals in nearly every area of our operations.

Our job was to understand and identify which plant was the leader for each KPI. You can see here that Plant F was identified as the best for KPI A. This visualization by shop allowed each plant to understand their gaps and to develop improvement plans... and each plant had very different needs. This joint activity has built strong shop teams and generated positive results.

Here's an example of how we utilized S-S-R for improvement at one of our plants.

Key points:

- Because of S-S-R, this plant is exceeding quality expectations. In fact, it is scoring better than our North American average. This forces other plants to focus on becoming even more competitive on quality.
- S-S-R allowed this plant to quickly implement a best practice standard with assistance and resources from the other NA plants. In the past, a best practice may have been surfaced during informal discussions with other plants or directly from its mother plant.

Now, however, it gets rolled out – or Yokotened – to other regional plants.

This S-S-R best practice I just reviewed was inputted into a North American data base system, which can be accessed by any team member, at any plant, anytime. Prior to the data base, best practices used to be shared and summarized during weekly phone conferences.

The idea behind the data base is to quickly share best practices in a timely matter.

Every best practice is archived. And the data base is user-friendly and easy to navigate. It even has contact information of the lead person in case you have any specific questions.

The second element of S-S-R is People Development. This involves fundamental and technical skills. We define fundamental skills as the technique or 'knack' of using the same method, resulting in consistent quality, safety and efficiency.

Fundamental skills are a basic know-how for our team members. For example, it involves the practice of properly feeling and handling nuts and bolts, or techniques for proper paint application, Hand & Eye inspection and pace. Many of these fundamental skills are rolled out by our North American Production Support Center in Kentucky.....they cascade this knowledge to our 13 plants. The following video shows how fundamental skills are used by our team members.

Pay close attention to this team members' technique and listen to the tool sound closely.

Dr. Baron. What did you notice in this video?

The team member uses good techniques: holding the gun level, initiating a smooth trigger, listening to the proper gun sounds.

Also, did you notice the way the team member dispensed the bolts? Team members are taught technique to pick the number of fasteners and to roll or dispense bolts by touch rather than sight.

This may seem like a simple skill, but it requires LOTS of training and repetition to master, it is representative of the many skills that we teach. And trust me, I've tried and it not very easy.

The North American Production Support Center – NAPSC – serves our 13 regional plants and shares best practices in a standardized manner. Team members who train at the NAPSC simulate hands-on operations

including the ones seen here: Quality; Stamping, Paint...and...Weld. NAPSC helps standardize, certify and support our North American facilities.

Another aspect of fundamental skills is a WEBEX video conference where an expert engineer presents a technical report on a process in their shops. For example, we recently held a paint technical training WEBEX. It was a very interesting and productive meeting because:

The third element of S-S-R is Model Change. Model Change activities include the use of gates – or milestones – ...K.P.I.s and resource requirements. Through these and other activities under Model Change element, we use a standard approach to new model introductions.

This is a sample of a Model Change chart. Each plant is listed on the top left. The bottom half of the chart lists major milestone activities, or gates as we call them, for all new models. To introduce a successful, high quality product, we have common criteria to measure and confirm during each phase. And as we quickly reflect from a phase, the improvement points can be made and immediately adopted by another plant in the region.

In the past, whenever Plant A was preparing for a new model, it may have a year or two before introducing the new improvement activity.

To illustrate further...in the past year, Texas was busy preparing for the Tacoma launch; Indiana had introduced the Highlander and the all-new Sienna; Kentucky was preparing for the refreshed Avalon; Canada was introducing the RAV4, And now our Mississippi plant begins preparations for the Corolla. Each of those plants used knowledge from past model changes – even at other plants – to utilize best practices to confirm and reconfirm progress. The result is better preparation and quality..... requires less engineering changes after SOP, thus saving time and money. Problems are recognized and resolved in advance of SOP. Plus, it keeps our team members fresh.

I chose a couple of KPI's representing safety and quality for our North American plants during the past few years. Our internal shipping quality audit, that measures the plants ability to meet designer specifications ... and safety incident rates have both seen significant improvement.

In summary, SSR has enabled a 'grass roots' network to form between experienced shop members in our North American operations. These teams are improving plant performance and creating resources to support one another as needed. Developing and deploying best practices has allowed effective innovation to replicate quickly and reduce redundant activities. As we make our 5 year plans for SSR not only can we learn from our regional activities but shop leaders are meeting globally to discuss efficient ways to share global best practices.....QUICKLY.

When Akio Toyoda spoke at this conference a year ago, he talked about his passion for cars and the importance of "genchi genbutsu" – the go and see approach. And our recent setbacks have had some question the integrity of our products and their safety and quality.

Mr. Toyoda's message is clear to everyone inside our company:

The Toyota Way is the engine that has driven our company's success.....and it will continue to drive our success for future generations.

Let me tell you this. While there are still many challenges ahead, I'm fully confident that we'll emerge as a smarter, leaner and more agile company to respond to our customers' needs.

As I alluded to earlier, The Toyota Way is supported by two main pillars:

- Continuous improvement; and...
- Respect for people.

This philosophy clarifies the values and methods that all team members embrace to carry out Mr. Toyoda's message.

We are never satisfied with where we are. And we always work to improve ourselves by introducing new ideas. S-S-R is a example of never being satisfied and introducing new, innovative ideas. It's the result of our team member intellect and innovation.

S-S-R allows us to become more autonomous and problem solve on a regional level. The bottom line: We have confidence in our team members. Without our team members, where would Toyota be today? Often, people ask me:

Why didn't Toyota layoff any workers during the difficult times?

Let me tell you: It was an easy decision.

We used the time to RE-TAIN and RE-TRAIN our team members. In fact, we pulled ahead the fundamental skills training shown early. ....To build capabilities for the future, to be more flexible to the market in this competitive global automotive environment.

Toyota has been fully committed to our team members by doing everything possible to secure their employment. We have had a shared sacrifice approach.

During these times, we suspended all overtime, we suspend all variable compensation (bonuses), we suspended pay raises, and in addition, for our senior leadership team... base pay was reduced.....everyone needs to sacrifice together.

I can remember stopping at a service station late last year, and a production TM I worked with at Indiana, came over to me and commented how appreciative he was about his job during this down turn ....but also, he thanked me for the sacrifice everyone was sharing in at our company.

That atmosphere.... builds an incredibly strong team. We're not out of the woods yet, but I'm confident we have made the right decisions for our customers, our team members, our communities, our business partners and our company.

Recently, Mr. Toyoda summed up things well. "There is a Japanese proverb: After the rain... the ground hardens," he said. "I am very confident, we will look back and say, the company has become more focused, on our customers and safety, because we went through this period."

We thank everyone for their support during these challenging times.

And I thank you for allowing me to speak to you this morning.