

## Toyota's Monozukuri

By K. Zokaei, 2012

Toyota can easily be the most storied company in the world. For decades it has caught the imagination of managers around the world becoming an emblematic case for quality, reliability, productivity, employee engagement, continuous improvement, cost reduction and market capitalization growth. Toyota Production System (TPS) is synonymous with efficiency, productivity and customer satisfaction and in spite of a few hiccups in recent years Toyota remains a source of inspiration for continuous improvement in every aspect of an enterprise. But Toyota also invests significantly in environmental excellence and leads the way in developing greener products as well as reducing its end-to-end environmental footprint.

Toyota's leanness and greenness both stem from the same corporate values. In a recent interview with a Toyota executive he told me *"We have a role to exercise in relation to the society. We don't think we can manufacture what we want to manufacture independently of the impacts on the wider society. Our philosophy is that we are an integral part of the environment and we are fulfilling a need of society which is the desire for personal transportation"*. Toyota's 'Guiding Principles', established in 1992, are also clear: *"Pursue growth in harmony with the global community through innovative management"*<sup>ii</sup>.

Dating back to the days of the founding fathers of Toyota, the company's core values revolve around having a sense of duty to contribute to the development and the welfare of the society at large rather than seeing the company just as a money making machine. Compare this with the present day's banking culture!

In February 2011, Chairman Fujio Cho said Toyota's mission is to *"preserve the Japanese Monozukuri"*<sup>iii</sup>. But what does 'Monozukuri' mean? It is a word that captures the true

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spirit of Toyota in relation to the concept of sustainability. The literal meaning of Monozukuri is 'production'. 'Mono' is the thing which is made and 'Zukuri' means the act of making but Monozukuri implies more than simply making things. It can be best compared to the word 'craftsmanship' in English.

However, in craftsmanship the emphasis is on the craftsman whereas in Monozukuri the person doing the making is deemphasized and the attention is on the 'thing' being made. This subtle difference reflects the Japanese sense of responsibility for using 'things' in production and their deep respect for the world around them both animate and inanimate. In the Japanese tradition of Monozukuri, the craftsman takes great care using resources not to be wasteful or futile. When an item or human effort is taken into use, there needs to be a benefit for the society as a result while, at the same time, the balance between production, resources and the society should be maintained.

Monozukuri, therefore, is manufacturing which is in harmony with nature and that is value adding for the society. **You could even say Monozukuri is the older sister of sustainable manufacturing.** Toyota's official website says "*Toyota has always sought to contribute to society through the Monozukuri philosophy – an all-encompassing approach to manufacturing. In its application of Monozukuri to the production of automobiles, Toyota has pursued a sustainable method of making its cars ever more safe, environmentally friendly, reliable and comfortable*"<sup>iv</sup>.

Monozukuri is also about deeply respecting the individuals who do the job since there is no mindless repetition in Monozukuri. As in craftsmanship, in Monozukuri, workers 'bring their mind to work' and are fully empowered and trained to deal with different situations creating an elevated sense of ownership. At Toyota, it is crucial for workers not to get robbed of their right to pride of workmanship and to gain intrinsic satisfaction in what they do. In this concept, making products (Monozukuri) is also making people (Hitozukuri) because they are instilled with pride and passion for their jobs.

Toyota's green vehicle technologies and other lean or green initiatives will not work without the full engagement of their people. Mutual trust, authority, empowerment, skills to make quality products, lifetime employment and the inquisitive culture of

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*Genchi Genbutsu* (go to workplace and see) are all tenets through which Toyota respects its people.

This way Toyota mixes work with fun and the day job with passion. As a Toyota manager puts it *“in our North American Plants, teamwork and fun plays a very important role. We have Kaizens through car or horse tracks (...) which are visible among all work teams and then it becomes a competition to report monthly your amount of reduction of energy and reduction of costs. Team members take home what they learn and worry about energy reduction and recycling at their homes as well. We have as well treasure hunts. They go to different sections of the plant or different plants and then it becomes a competition. I have sent our engineers on the weekends to look at ways to reduce energy in communities [...]. We do this for plants, our suppliers or communities”<sup>v</sup>.*

On the whole, Toyota’s environmental performance is driven far more by their profound commitment to harmonious manufacturing (Monozukuri) and their role in the society as a value adding corporate citizen dating back to the precepts of the founding father Sakichi Toyoda, than environmental regulations. Recently we completed a benchmark study of the environmental performance of various automakers which will be soon published in a book titled “Creating a Lean and Green Business System”. Our benchmarking showed that Toyota performs incredibly well against the rest of the industry both in terms of reducing direct emissions from their own production and logistics and development of green vehicles to reduce environmental impacts during use. For example, Toyota’s remarkable success in hybrid technologies is soon to be followed with the introduction of several plug-in hybrid, electric vehicle and fuel cell hybrid vehicle platforms.

Over many years, Toyota has developed rigorous structures for generating environmental strategies and integrating it into their daily operations through meticulous *Hoshin* planning. Moreover, across all Toyota plants, there are cascading measures in place at all levels, from the top board to operators, in order to discern the correct direction. When opportunities are identified, Toyota employees apply five KPI criteria which, in the order of our priority, are: safety, environment, quality, production and cost<sup>vi</sup>.

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During the recent crises, Toyota's resilience and commitment to Monozukuri was tested once more. Many commentators and industry experts have said that Toyota weathered the storm well<sup>vii</sup> and have used the problems as an opportunity to challenge itself towards an even more sustainable future. Toyota did this by going back to its basics and by an even greater commitment to its core values. Throughout history challenges, large and small, have reinforced the Toyota Monozukuri discipline and stoked its passion for innovation. By going back to its guiding principles and by practicing the idea of harmonious manufacturing Toyota is going to shape the future of the automotive sector and even maybe the future of all manufacturing.

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<sup>i</sup> Interview with Mr. Steve Hope, General Manager, Environmental Affairs and Corporate Citizenship, Toyota Motor Europe

<sup>ii</sup> Toyota's Guiding Principles available from Toyota corporate website

<sup>iii</sup> Toyota Environmental Report 2011.

<sup>iv</sup> TOYOTA MOTOR CORPORATION GLOBAL WEBSITE (2011) Special Story [http://www.toyota-global.com/sustainability/sustainability\\_report/special\\_story/contributing\\_to\\_society\\_by\\_making\\_cars.html](http://www.toyota-global.com/sustainability/sustainability_report/special_story/contributing_to_society_by_making_cars.html)

<sup>v</sup> Butt, Kevin (2010) Speech at 'From Shop Floor to Top Floor: Best Business Practices in Energy Efficiency Conference', Centre for Climate and Energy Solutions, [accessed 22nd January 2012] at <http://www.c2es.org/energy-efficiency/conference/speakers/kevin-butt-general-managerchief-environmentalsafety-officer-to>

<sup>vi</sup> Interview with Mr. Steve Hope, General Manager, Environmental Affairs and Corporate Citizenship, Toyota Motor Europe

<sup>vii</sup> Liker, J.K., Ogden, T., Toyota under Fire: Lessons for Turning Crisis into Opportunity. McGraw-Hill Professional (2011).