

Toyota Motor Corporation: 2010 Recall

- Situation Analysis
 - Strategies employed
 - Toyota Systems and Processes
 - TPS – Product Realization Process
 - ‘Process – Cause - Effect’
- Culture, Litigation and President Aikido Actions to US Congressional Hearings
 - Lessons Learned for Lean and Six Sigma folk



Michael W McLean

AOQ QLD 27 April 2010

Sydney, NSW

Embedding Strategic Change

www.mclean-mc.com.au

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Appendix C: McLean Management Consultants Pty Ltd – sample experience

Mining and Minerals:	International:
<ul style="list-style-type: none"> • BHP Billiton: <ul style="list-style-type: none"> • Rod and Bar Steelworks – Operational Excellence • Grooyte Eylandt Mining NT – Business Planning and OE • Ok Tedi Mining PNG – Business Planning, OE, HR • Coal – Appin, Tower, Nebo and Corporate HQ • Property HQ – Newcastle Planning Redevelopment • Anglo / Shell Coal <ul style="list-style-type: none"> • Drayton; Callide; CAPCOAL; Southern; Dartbrook • Corporate HQ – “One Team One Coal” • Smelting: <ul style="list-style-type: none"> • Kalgoorlie Nickel and Port Kembla/Southern Copper • Comalco CRA Rio Tinto <ul style="list-style-type: none"> • Comalco Products • Best Practice Smelters • Boyne Island • Bell Bay • Pasminco Metals • Coal & Allied • Others: <ul style="list-style-type: none"> • Camberwell Coal; Dalrymple Bay Coal Terminal • Muswellbrook Coal; Newcastle Ports Corporation • Port Waratah Coal Services; Pacific National • Peabody Mine; Port Waratah Coal Services • Weir Minerals 	<ul style="list-style-type: none"> • Arabian Cement Company – Organisation Strategy, Organisation and Process-based Job Design • ASEAN Secretariat Indonesia, 10 Member Nations and AusAID Supplier Capability Improvement Program • ASEAN Automotive Federations and Member Government Representatives, Automotive OEMs, Tiered Suppliers and Quality Certification Bodies Stakeholder planning workshop for 2015 ASEAN Integration • ASEAN SME Working Group, Singapore and 10 Government Member Nation Automotive and other Manufacturing/Value Adding Sector Planning Workshop • ASEAN ICT Regional workshop Thailand • American Supplier Institute – Automotive Quality Management, Six Sigma and Lean • American University Cairo, Egypt – Six Sigma Champions • Asian Productivity Organisation regional planning process • BHP Billiton Ok Tedi Mining Company - PNG • Bouraq Airlines Business Excellence • Civil Aviation Authority Singapore - Changi Airport and – Visioning and Business Planning process to be #1 Airport in Customer Service Design and implement Customer Service Management programme achieving and sustaining #1 Airport in Customer Service since 1988 • Ernst & Young– QFD, Taguchi, Adv SQC, Chicago, IL, USA • Etilisat Telecommunications Six Sigma UAE • Fiji Housing Authority – Organisation Review & Structuring • GM – Australia, Singapore WWP and Elsmere Port UK • Japanese Union of Scientists and Engineers – Japan • Livonia Technical Services Mi USA • Nissan Motor Company – Australia, USA and Japan • Superintending Company of Indonesia – Sucofindo Consulting and Certification Services • Surveyor Indonesia – Consulting and Certification Services • Qatar Transport Company www.mowasalat.com • QCI International – TQM, CoQ, QCC's Ca and Tenn.
<p style="text-align: center;">Other Industries:</p> <ul style="list-style-type: none"> • ADI/Thales – Bushmaster, GI Ships, Small Arms & Propellant VSM • BOC Special Gases Laboratory • Brambles Transport – Newcastle NSW • Futuris Interior Systems SA – automotive seat assy DFMEA • GMH – Excel Logistics and Nylex Elastomer – Door Trim integrity • GM Holden Engine Fabricated components Handling & Packaging • Electrolux Orange NSW – DFMEA, PFMEA, PCP, EMS • RAAF – Richmond, Edinburgh, Williamstown, Tindal, Pearce 	

Inside Toyota, Executives Trade Blame Over Debacle

By NORIHIKO SHIROUZU



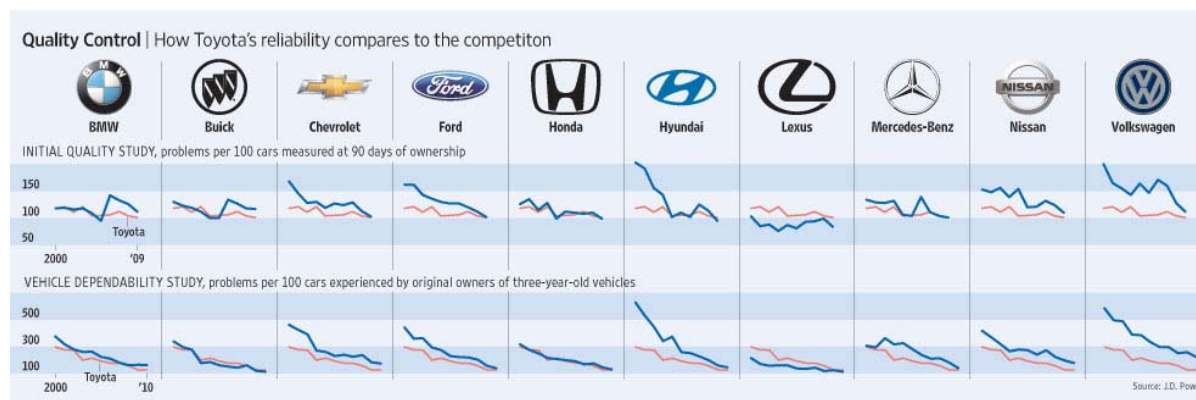
Bloomberg News

Akio Toyoda, president of Toyota Motor Corp., standing, speaks at headquarters last month. Mr. Toyoda, a member of the Toyota founding family, is at odds with nonfamily managers over the company's direction.

TOYOTA CITY, Japan—[Toyota Motor Corp.](#)'s quality crisis is exposing—and exacerbating—a long-simmering internal feud. The battle pits the founding Toyoda family against a group of professional managers, each blaming the other for the auto maker's woes.

President Akio Toyoda, the 53-year-old grandson of the founder, has tried to push out one of the nonfamily executives: his predecessor as president, Katsuaki Watanabe, now vice chairman.

Mr. Toyoda suggested to Mr. Watanabe, through an intermediary, that the former president leave the auto giant and instead run a Toyota affiliate,



The Press

The New York Times

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February 1, 2010

Toyota's Slow Awakening to a Deadly Problem

By [BILL VLASIC](#)

DETROIT — The 911 call came at 6:35 p.m. on Aug. 28 from a car that was speeding out of control on Highway 125 near San Diego.

The caller, a male voice, was panic-stricken: "We're in a Lexus ... we're going north on 125 and our accelerator is stuck ... we're in trouble ... there's no brakes ... we're approaching the intersection ... hold on ... hold on and pray ... pray ..."

The call ended with the sound of a crash.

The [Lexus ES 350](#) sedan, made by [Toyota](#), had hit a sport utility vehicle, careened through a fence, rolled over and burst into flames. All four people inside were killed: the driver, Mark Saylor, an off-duty California Highway Patrol officer, and his wife, daughter and brother-in-law.

Is Toyota Paying the Price for Rapid Growth?

Associated Press Financial Wire

January 28, 2010



A flood of recalls in the United States shows Toyota compromised on quality control in an overzealous drive to cut costs and expand sales during its climb to the top of the world auto market.

Recalls for gas pedals prone to sticking and faulty floor mats that can entangle the accelerator are a devastating blow to an automaker that prides itself on a reputation for quality. The safety doubts have also forced Toyota to suspend U.S. sales and production of eight models—including the Camry, America's top-selling car—and announce recalls in China and Europe.

Some analysts say the huge number of recalled vehicles—topping five million, when accounting for models being recalled more than once—stems from the auto industry's drive to use the same parts across a range of models to cut costs. Thus, even a small defect can set off a recall numbering millions of cars.



National Highway Traffic Safety Administration
Our Mission: Save lives, prevent injuries, reduce vehicle-related crashes



For Immediate Release
Wednesday, September 26, 2007

Contact: Rae Tyson
Telephone: (202) 366-9550

NHTSA CONSUMER ADVISORY: Secure Floor Mats in 2007/2008 Lexus ES 350, Camry, Other Toyotas; Advisory Also Extended to Other Vehicles

Toyota to Conduct Floor Mat Recall

Owners of 2007 and 2008 Lexus ES 350 models and certain other Toyota vehicles are being urged to make sure the driver-side, **"All Weather"** floor mats are properly secured before driving the vehicles, according to the National Highway Traffic Safety Administration and Toyota Motor Company.

Toyota announced it will conduct a recall of all the affected floor mats, which are used in the 2007/2008 Lexus ES 350 as well as the 2007/2008 Camry.

NHTSA and Toyota noted that, if unsecured, the mats being recalled can slip forward and trap the accelerator pedal, causing the vehicle to accelerate uncontrollably.



Example of an unsecured driver-side floor mat trapping the accelerator pedal in a 2007 Lexus ES350



Always make sure your driver-side floor mat is properly secured by the tabs. Never overlay two mats on top of each other because the top-most mat can not be secured properly by the retention hooks.

- Toyota designed the accelerator pedal and Lexus Rubber driver floor mats (not sold in Australia as we use carpets floor plates)
 - TMC specified the Floor mats, sourced such from a “Approved Supplier”
 - Combination of interactions causes the front of the pedal to catch under floor mate and ‘stick’ in down and accelerating position:
 - Carpets mats have little spikes underneath to bight into the under mate carpet
 - Normal driver could push rubber mat off lug
 - Rubber mat could slide back & forward and the when accelerator cable was pressed down hard, would clip under mat and stick
 - 10 Toyota Motor Company America models pulled by company and stopped from being sold from US Dealers
- News as at 27 April 2010:*
- *GM, Ford and D-C OEM’s sales increase*
 - *Ford beats VW as biggest in Europe*
 - *GM USA pays back Fed Govt \$6.8b buy-out*
 - *Fiat CEO Sergio Marchionne's 5 year plan with Chrysler*



- Toyota are design responsible for the accelerator mechanism which is 'drive-by-wire' for new Prius
- Toyota USA selected CTS a US Tier 1 Supplier to supply as per TMC USA Specification and Tolerances; Denso in Japan
- CTS, DENSO (possibly Aisin) passed TMC Supplier Quality Assurance and Quality Engineering "Price – Delivery - Quality" supplier system, process and product audits
- TMC USA required all components, modules and systems to comply to PPAP, PFMEA, PCP, SOP, VAVE, Cpk> 2.0
- CTS complied with and supplied the plastic spline mechanism for mechanical hysteresis [when two gears slide over each other] sends an electronic signal to the fuel mix computer and others, and so driver 'feels' like a 'normal pedal / accelerator cable'
- There were problems and TMC USA had customer feedback and also it appears their 'Data Loggers' in the car showed that there were accelerator problems
- CTS had no design responsibility for the pedal other than the design of the Hall sensor, which (at least so far) has not be associated with any of the problems.

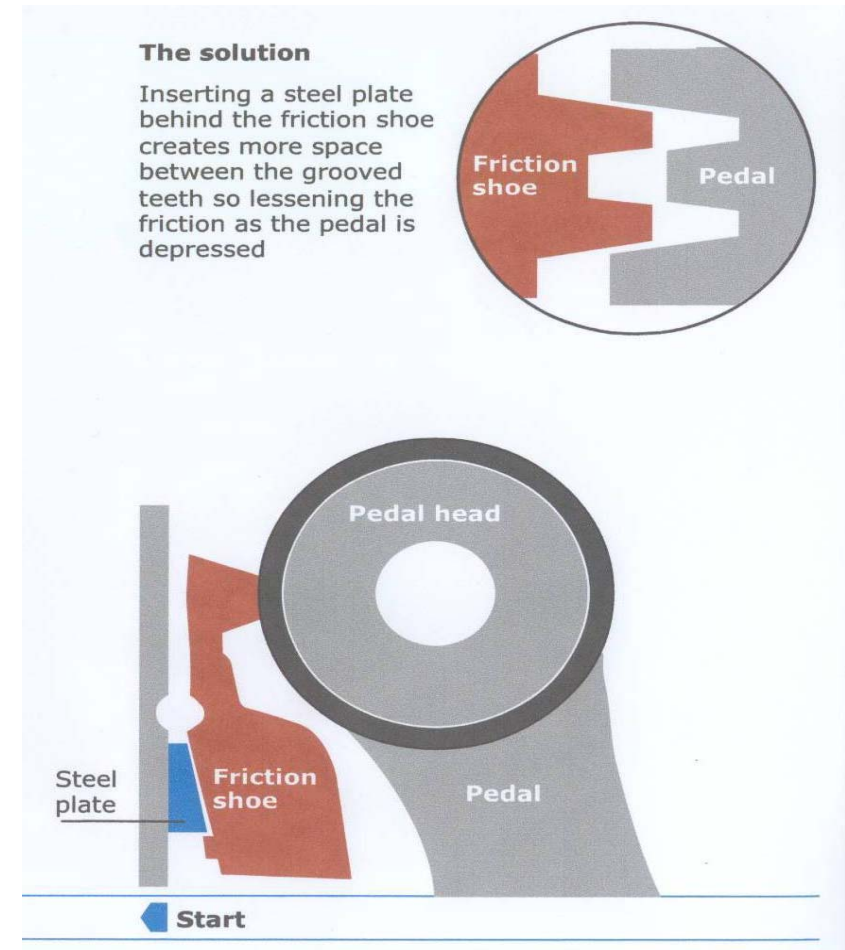
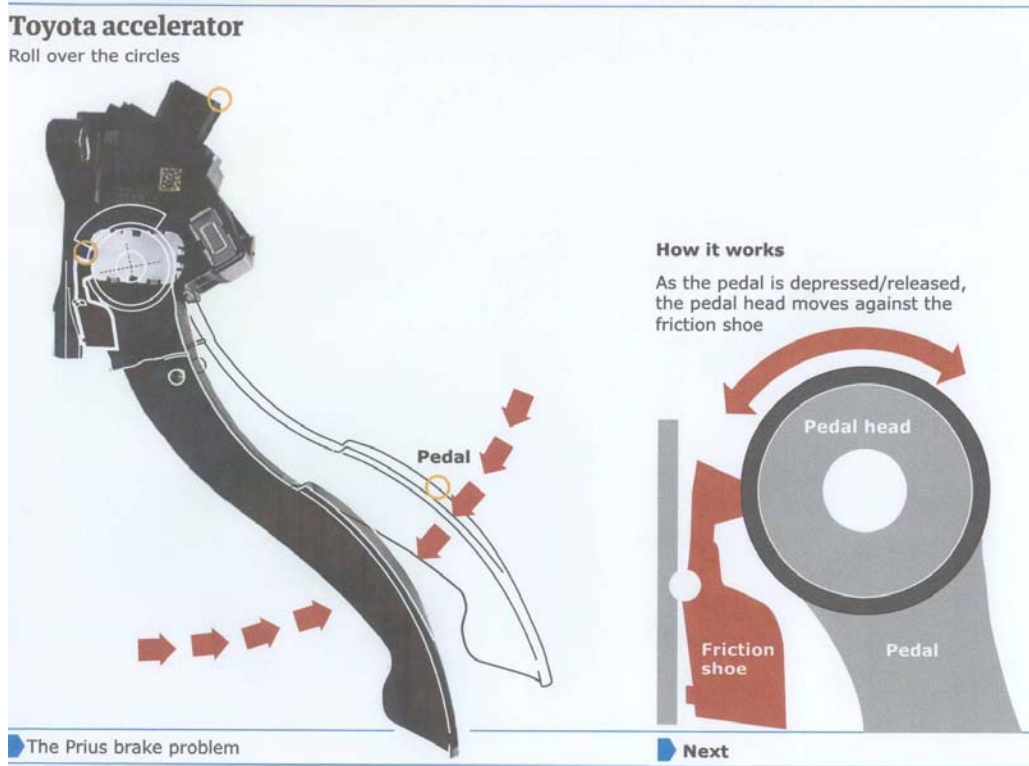
**Repairing Toyota.
Simple fixes for
deadly problems**



STICKY ACCELERATOR
A 2.3-mm steel reinforcement bar, top, is inserted in a gas-pedal assembly, above. The shim fills a gap created by wear, reducing friction and eliminating stickiness

Toyota's sticky accelerator problem

Toyota has been forced to recall millions of defective cars worldwide after a problem with sticky accelerators. The beleaguered carmaker will now install a brake-override system in all future models worldwide

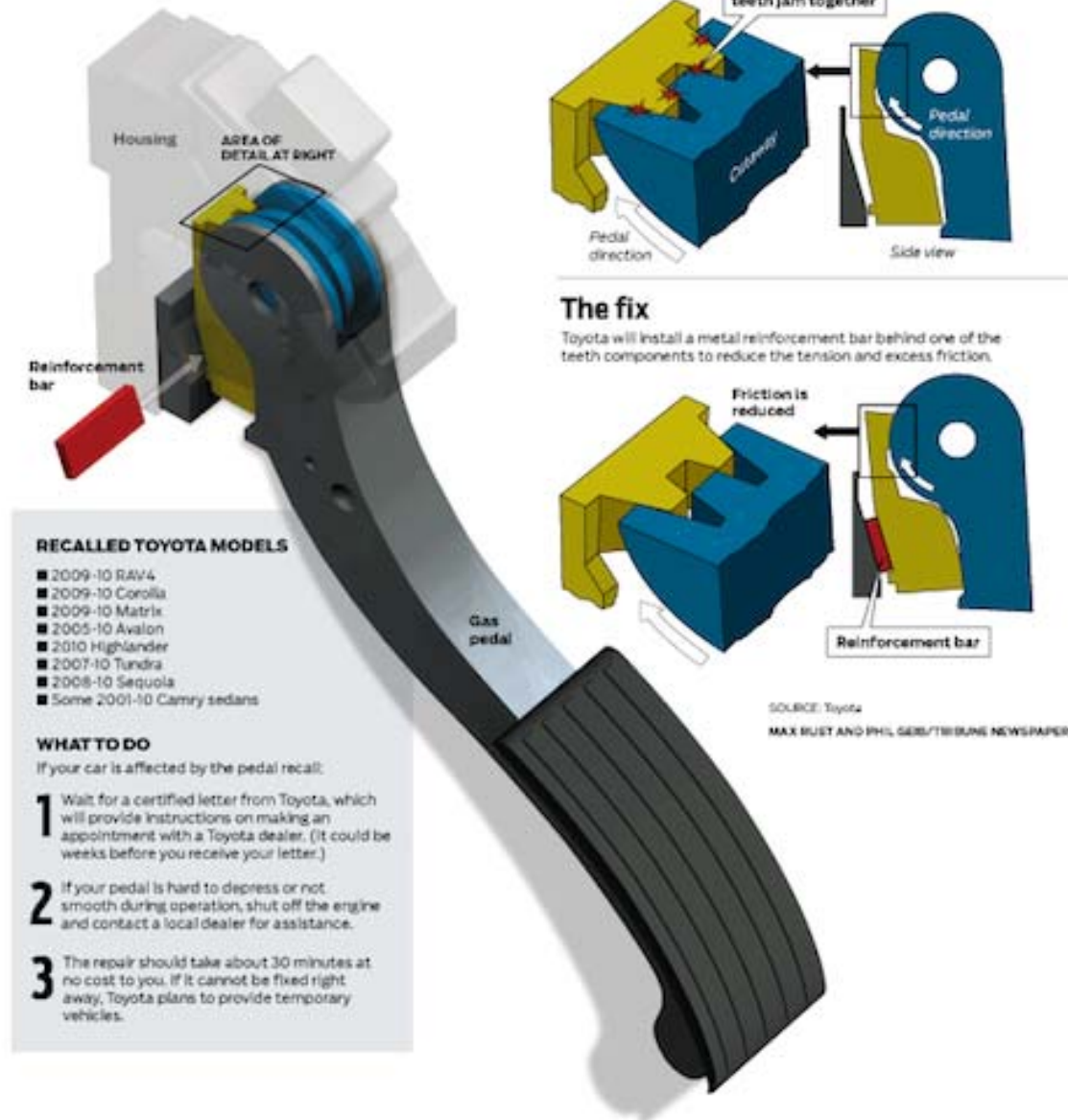


<http://www.guardian.co.uk/business/interactive/2010/feb/04/toyota-automotive-industry>



TOYOTA

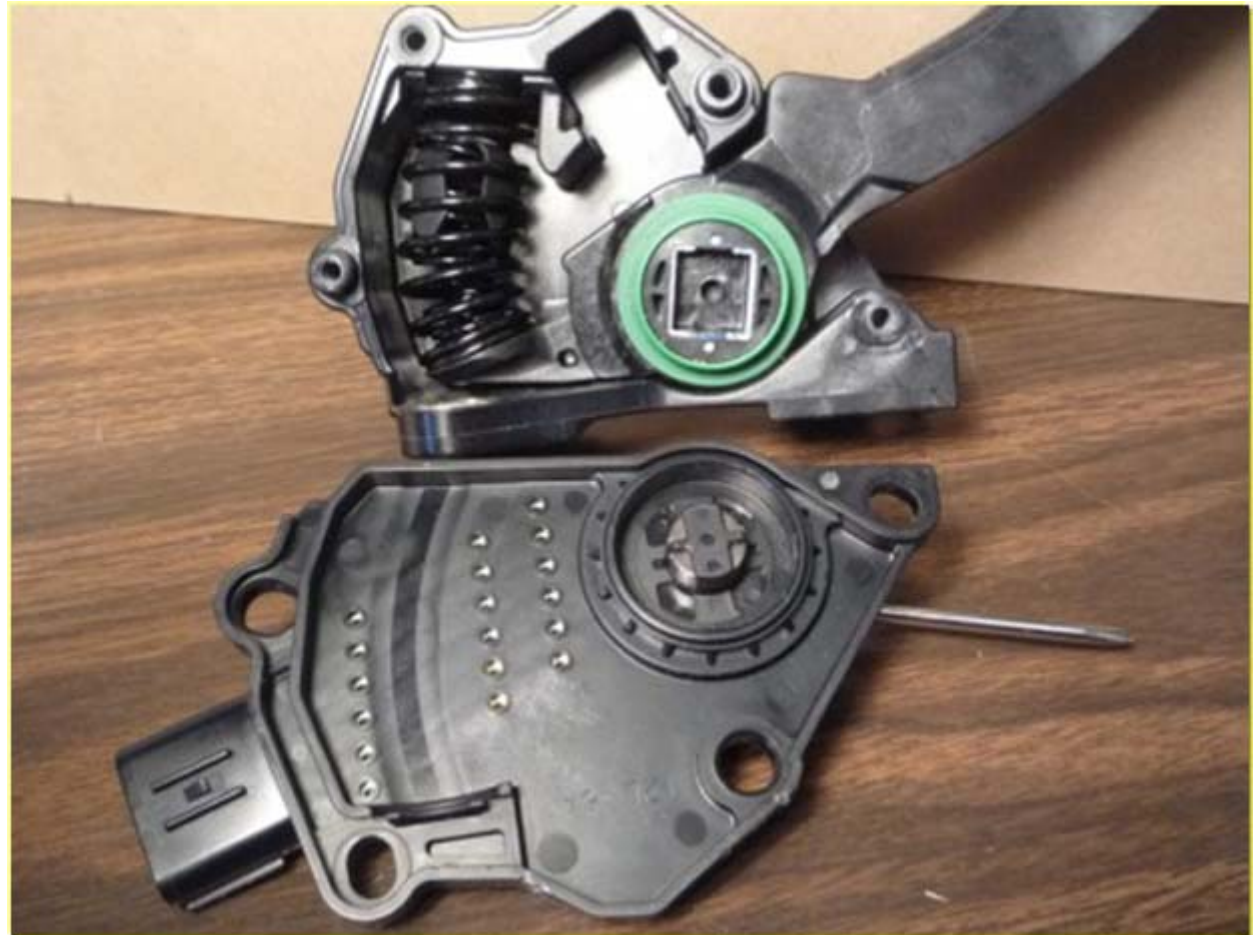
The Toyota fix for the Gas Pedal



The DENSO USA supplied part

The good pedals, made by Denso and have their name molded into the pivot housing and are not subject to the recall .

Also, the housings of the two designs look very different; the CTS doesn't have that circular area with radial spines sticking out of the side.



- A USA Automotive and Aeronautical Engineer (he designed passenger jet wing flap braking mechanisms)
- The frictional meshing (the "hysteresis" device, which is designed to simulate the feel of a throttle cable) teeth cannot lead to many of the reported problems.
- Worse, if wear occurs, the potential for locking this mechanism in the CTS pedal is even less.
- Nor can a pedal trapped by a floor mat fully explain all of the incidents (and most of the fatal crashes).

- http://www.caranddriver.com/features/09q4/how_to_deal_with_unintended_acceleration-tech_dept
- http://www.caranddriver.com/news/car/10q1/toyota_recall_sandal_media_circus_and_stupid_drivers-editorial



Wall Street Journal KEN THOMAS

Associated Press Writer

5:16 p.m. EDT, April 9, 2010

WASHINGTON (AP) — The government says in a letter to Toyota that it's considering a second civil penalty against the automaker.

Toyota is already facing a fine of more than \$16 million for failing to promptly notify the government about defective gas pedals.

The Transportation Department told Toyota in a letter this week that accelerator pedals involved in the [recall](#) exhibited two separate defects that may require two separate remedies.

The government also says if there weren't a cap of about \$16.4 million on fines, Toyota could have faced civil penalties of \$13.8 billion. That's because the government could fine the company \$6,000 for each of the 2.3 million vehicles under recall. Toyota has recalled more than 8 million vehicles worldwide.

Problems grow TOYOTA

Toyota has recalled more than 8.5 million vehicles in recent months because of growing complaints about safety issues.

- '06 Sept.** National Highway Traffic Safety Administration (NHTSA) opens investigation on reports of "surging" in Camrys; closes investigation a year later

- '07 March** Toyota receives reports about accelerator pedal glitch in Tundra truck
 - Sept.** Toyota recalls some Lexus and Camry models to secure floor mat that could trap gas pedal, cause acceleration

- '08 Jan.** NHTSA investigates unintended acceleration in Toyota Tacoma pickups; probe closed in Aug. after no defect found
 - Aug. 28** Off-duty Calif. Highway Patrol officer, family killed after gas pedal in Lexus is caught under floor mat

- '09 Sept. 29** Toyota issues recall for 3.8 million vehicles due to risk of gas pedal becoming caught under floor mat
 - Nov. 4** NHTSA accuses Toyota of providing owners with "inaccurate and misleading information" about floor mat recall
 - Nov. 25** Toyota recalls at least 4 million vehicles to reconfigure gas pedals

- '10 Jan 21** Toyota recalls 2.3 million vehicles to correct separate problems that could cause gas pedal to stick
 - Jan 26** Toyota suspends sales; halts production of eight models due to gas pedal recall; the next day, adds 1.1 million to floor mat recall
 - Feb. 1** Toyota says it had developed fix for sticking gas pedal; begins shipping part to dealers
 - Feb. 3** NHTSA says it has received more than 100 complaints about brake problems in Prius hybrids
 - Feb. 4** Toyota says gas pedal recall could cost \$2 billion; total recall is 8.1 million; says Prius problem is software glitch; NHTSA opens Prius probe
 - Feb. 5** Toyota CEO makes first public appearance to apologize for recall problems
 - Feb. 9** 437,000 Priuses recalled for brake problems; NHTSA says it has received complaints about steering problems in Corollas
 - Feb. 22** Federal prosecutors open criminal investigation into Toyota's safety problems
 - Feb. 23** Congress begins hearings on Toyota recalls

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Source: CNN, AP
Graphic: Judy Treible



- <http://www.autonews.com/apps/pbcs.dll/article?AID=/20100413/RETAIL05/100419959/-1>



THE TOYOTA RECALL CRISIS

- **Toyota halts Lexus GX 460 SUV sales after safety warning**
- TOKYO/DETROIT - Influential magazine *Consumer Reports* urged car shoppers not to buy the SUV, calling it a "safety risk" that could roll over.
- Toyota said its engineers were "vigorously testing" the luxury model to identify the risk cited by *Consumer Reports*, which said the vehicle was prone to slide when driven in sweeping turns and gave it a "not acceptable" rating.
- The GX's rear end "slid out until the vehicle was almost sideways before the electronic stability control system was able to regain control" at a Connecticut test track, the magazine said. "In real-world driving, that situation could lead to a rollover accident, which could cause serious injury or death."



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Toyota Book of Knowledge Auto News USA 13 April 2010

- <http://www.autonews.com/apps/pbcs.dll/article?AID=/20100412/OEM02/304129970/1143/breaking>

Toyota's 'Books of Knowledge'

Automaker shields private info from plaintiffs; congressman asks: Did the company go too far?
WASHINGTON -- Over the years, Toyota has settled a lot of product liability lawsuits, in part so it wouldn't have to produce proprietary internal documents to the plaintiffs

Books of Knowledge are highly sensitive documents, they describe the contents differently.

The Books contain "proprietary and commercially sensitive information regarding:

- job process flow
- manuals
- procedures and
- regulatory information" compiled since 2002, Toyota said in a March 12 letter to Towns' panel



• <http://www.autonews.com/apps/pbcs.dll/article?AID=/20100412/OEM02/304129970/1143/breaking> 13 April 2010

Toyota's 'Books of Knowledge'

- Biller said the Books consisted of hundreds of thousands of electronic documents covering "Toyota's philosophy and specific tools it uses to:
 - develop
 - design
 - engineer
 - evaluate and
 - test vehicles.



• <http://www.abc.net.au/news/stories/2010/02/27/2832034.htm>

- A review of the documents found multiple references to a secret "Books of Knowledge" kept in electronic form by Toyota engineers, consisting of design and testing data for all vehicle lines and parts, Mr Towns said.
- subpoenaed documents "indicate that Toyota entered into multimillion-dollar settlements in tort cases where they feared the plaintiff's lawyer was getting close to discovering the existence of the Books of Knowledge".

The Press

Toyota found to keep tight lid on potential safety problems

A Times investigation shows the world's largest automaker has delayed recalls and attempted to blame human error in cases where owners claimed vehicle defects.

By Ken Bensinger and Ralph Vartabedian

December 23 2009

During a routine test on its Sienna minivan in April 2003, Toyota Motor Corp. engineers discovered that a plastic panel could come loose and cause the gas pedal to stick, potentially making the vehicle accelerate out of control.

The complete article can be viewed at:

<http://www.latimes.com/business/la-fi-toyota-secrecy23-2009dec23,0,5601716.story>

The Press

["http://autos.aol.com/article/toyota-documents-subpoenaed"](http://autos.aol.com/article/toyota-documents-subpoenaed)

Was Toyota Bragging When It Saved \$100M In Recall?

Or Was Cost Savings Simply Smart Business?

Posted: Feb, 22 2010

Gallery: Toyota Recall Document

Details of the company's actions were obtained by *The Detroit News*, which received a cache of documents given to the House Oversight and Government Reform Committee by Toyota. One document in particular shows the company internally highlighted its \$100 million savings by way of conducting a limited recall as opposed to a full one.

That particular limited recall, involving sudden acceleration on Toyota and Lexus vehicles, was limited to 55,000 vehicles in 2007, which company officials considered a "win."

The Press

USA Press on 21 February 2010

<http://www.msnbc.msn.com/id/35510079/ns/business-autos/>

Toyota saved \$100 million by limiting recall Internal documents show results of negotiations with regulators in 2007.

Toyota, in an internal presentation in July 2009 at its Washington office, said it saved \$100 million or more by negotiating an "equipment recall" of floor mats involving 55,000 Toyota Camry and Lexus ES350 vehicles in September 2007.

The savings are listed under the title, "Wins for Toyota — Safety Group." The document cites millions of dollars in other savings by delaying safety regulations, avoiding defect investigations and slowing down other industry requirements.



Toyota Australia recalls

- Toyota - Prius ZVW30 vehicle recall
- Toyota Motor Corporation Japan and Toyota Motor Corporation Australia have initiated a safety recall campaign on its current generation Prius vehicles. Current generation Prius commenced being sold in Australia in July 2009.
- Due to programming of the ABS (Anti Lock Braking System) there is a possibility that the braking force may be slightly degraded on completion of ABS activation. In situations where the brake pedal is lightly held and ABS is activated for a moment on icy or bumpy roads, the vehicle stopping distance may be longer.
- Toyota Australia will be writing to all people who have affected vehicles.
- For more information on the recall go to:
<https://www.recalls.gov.au/content/index.phtml/itemId/972536>
- Toyota Australia has also issued a media release on their website containing FAQ's: <http://news.toyota.com.au/toyota-australia-advice-to-prius-customers>

The Press

USA Press on 21 February 2010

<http://www.newsweek.com/id/233585?GT1=43002>

Most drivers don't realize is that two thirds of new U.S. automobiles have black boxes called "event data recorders." These devices tell the airbags when to deploy, but they also record the car's speed, whether the brake or gas pedal was engaged, and if seat belts were fastened. They've become such a vital tool to car-crash investigators that the National Highway Traffic Safety Administration (NHTSA) has issued new requirements, which take effect in 2012, standardizing exactly what data the devices measure.

In theory these black boxes could help explain what's causing the sudden acceleration problems that led Toyota to recall millions of vehicles. There's just one catch: Toyota keeps its data secret. Ford, GM, and Chrysler's black boxes use an open platform that allows law-enforcement officials to download data. But only Toyota is able to download the proprietary data off its devices.



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Recalls!

<http://www.recalls.gov.au/content/index.phtml/itemId/952855/fromItemId/952839>

Ford 2010

[Ford—FG Falcon Utility \(3 seat models only\)—Park Brake Lever](#) 5th March 2010

[Ford—BF Series II and FG Falcon E-Gas vehicles —Brake Booster Check Valve \(Refer to Recall number 2009/10855 - 5 June 2009\)](#)

GM Holden 2010

[Holden—CG Captiva—Intermediate Shaft Inspection](#)

Volvo 2010

[Volvo—S80 and XC70 MY 2007 to MY 2008](#) 14th April 2010

[Volvo—XC60 vehicles—Steering Gear](#) 5th March 2010

Honda 2009

[Honda—2001-2002 Honda Accord Sedan and 02YM Honda CR-V—Airbag Inflator Module](#)

[Honda—CR-V—Child Restraint](#)

LG

[LG Electronics Australia Pty Ltd—Side by Side Refrigerators](#) 26th March 2010



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Recalls abound!

<http://www.abc.net.au/news/stories/2010/02/27/2832034.htm>

Mercedes

Mercedes-Benz—S Class (type 221)—With Active Body Control (ABC) Suspension 23rd
March 2009

Nissan

Nissan Motor Co (Australia) Pty Ltd—Nissan J32 Maxima—Curtain Air Bag Strap 26th
November 2009

Suzuki

Suzuki—MF Alto 8th April 2010

Toyota

Toyota—Prius ZVW30 vehicles—Brake Feel 9th February 2010

BMW

BMW—K 1300 range motorcycles—Foaming in the front brake master cylinder reservoir 11th June 2009



How it started

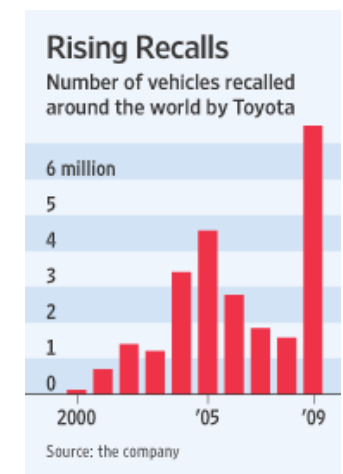
Mr. Toyoda and his allies have been saying openly that when he took the top job last year after a 15-year hiatus for the Toyoda clan, he inherited a company weakened by nonfamily predecessors who sacrificed quality for faster growth and fatter margins.

The problems arose when "some people just got too big-headed and focused too excessively on profit," Mr. Toyoda said at a Beijing news conference in March. He acknowledged the "ultimate responsibility for mistakes... lies in me."

A week earlier, [Jim Press](#)—once the top Toyota executive in the U.S. before he jumped to a rival auto maker—issued a statement declaring: "***The root cause of their problems is that the company was hijacked, some years ago, by anti-family, financially oriented pirates.***"

Those executives "***didn't have the character to maintain a customer-first focus. Akio does,***"

Takahiro Fujimoto, a professor of economics at Tokyo University who has studied Toyota extensively, says airing problems openly is very much part of Toyota's corporate culture focused on **kaizen, or continuous improvement**. "But it's highly unusual for anybody inside Toyota to publicly criticize certain individuals by name," **The feud dates to the mid-1990s, when the family relinquished control** of the chief executive's office for the first time since Eiji Toyoda, cousin of founder, became president in 1967. Non-Toyodas also ran the company from 1950-67. By the time Akio's uncle, Tatsuro, stepped down as president in 1995, it was losing market share and risked posting its first loss since 1950

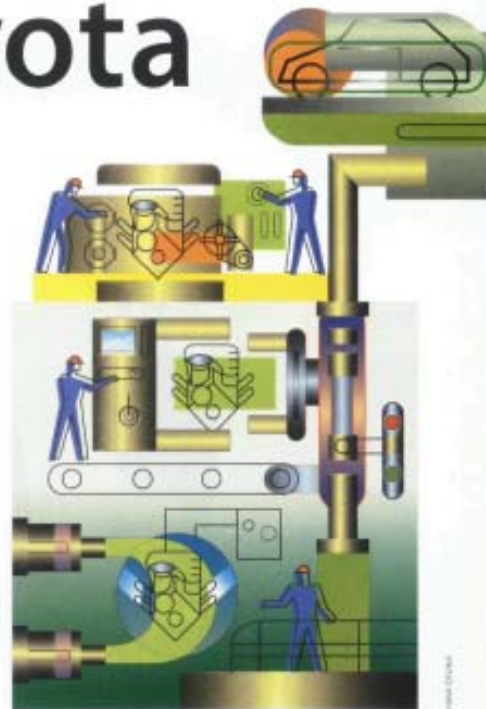


Spear, Amasaka and Liker's research

Learning to Lead at Toyota

by Steven J. Spear

Toyota's famous production system makes great cars—and with them great managers. Here's how one American hotshot learned to replicate Toyota's DNA.



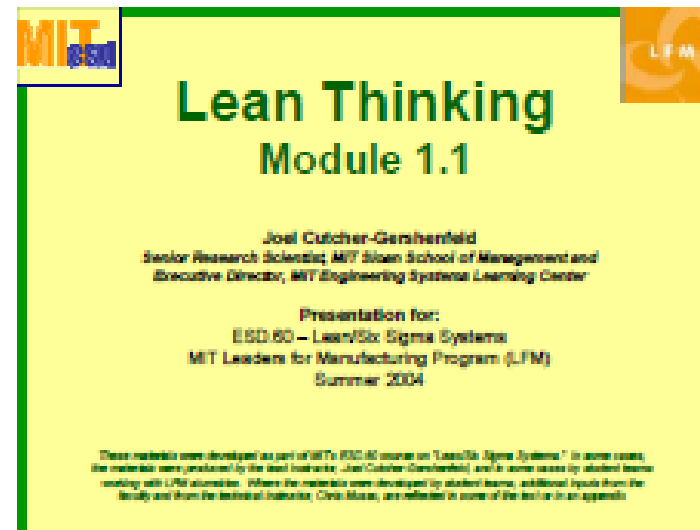
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World Scientific
www.worldscientific.com

AN INTEGRATED INTELLIGENCE DEVELOPMENT DESIGN CAE MODEL UTILIZING *NEW JIT*: APPLICATION TO AUTOMOTIVE HIGH RELIABILITY ASSURANCE

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Managing Suppliers

- Suppliers are extensions of Toyota (more than “buying parts”)
- Select with same care as own associates
- Develop like own associates
- Long-term partnership
- Tier structure: Levels of responsibility
- Strict cost targets and timing
- Integrated systems (JIT, product development systems)



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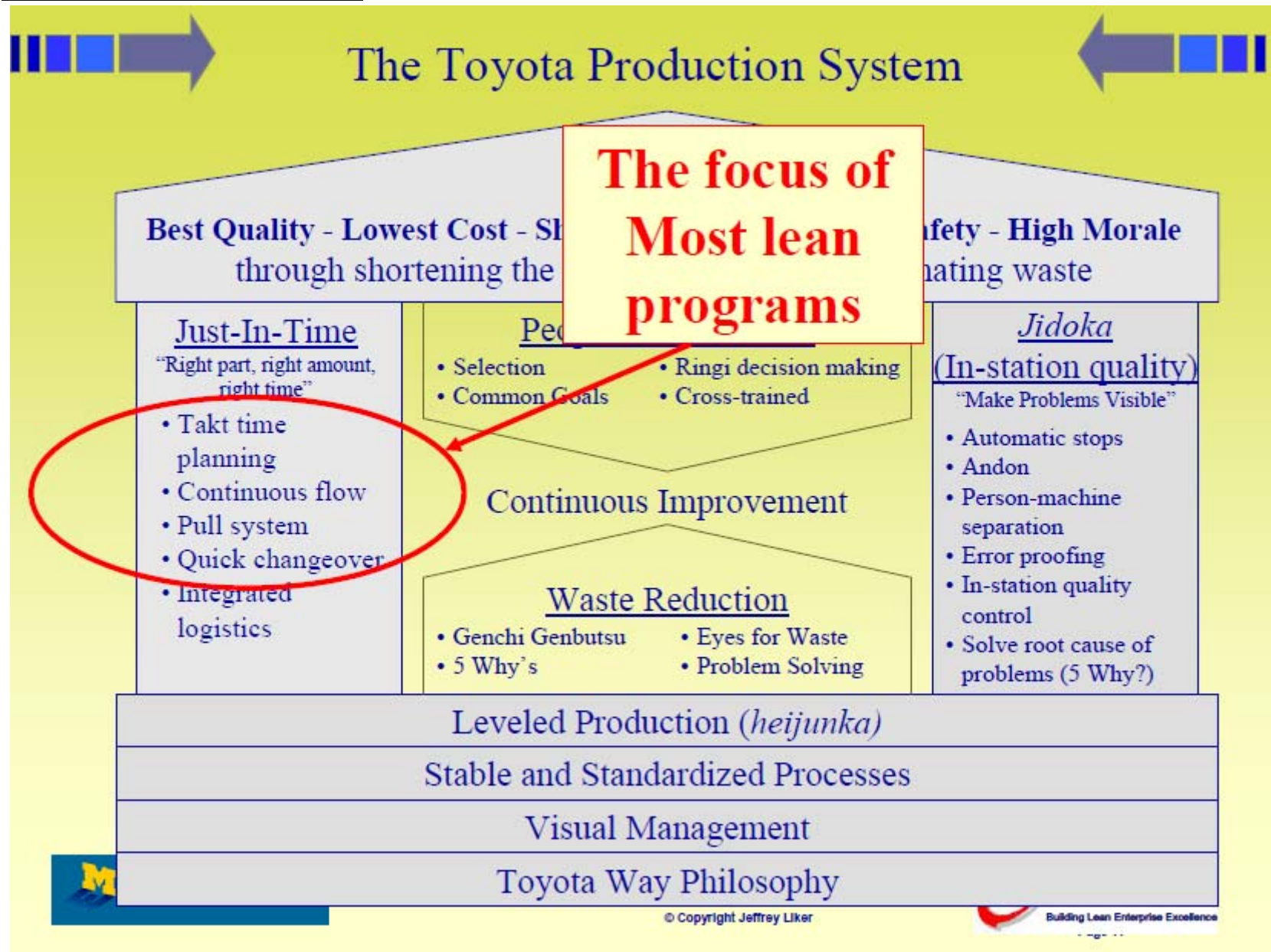
Toyota CC21 Purchasing Challenge

- Normal expectation: 3-4% price reduction per year after model year launch
- Challenge by Toyota N.A., V.P. of Purchasing (Tsugio Kadawaki)
- Challenge: Meet best prices in world with Toyota quality
- TrimMaster Goal: 30% price reduction for new vehicle launch
- TrimMaster Approach:
 - *Work with Toyota engineers through value engineering*
 - *Hoshin Planning so every function involved in cost reduction*



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Previous Watanabe President leadership ‘Simple, Slim and Speedy’ – was called ‘crazy’ by the Family

The HBR Interview | Katsuaki Watanabe

TOYOTA'S WAY is to measure everything – even the noise that car doors make when they open and close as vehicles perform their final inspections on newly manufactured automobiles. By any measure, whether quality or reputation, Toyota Motor Corporation has become one of the most successful companies in the world today. This year marks the 70th anniversary of Toyota's founding, 50 years since the Japanese company started exporting cars to the United States, and a decade since it launched the world's first commercial hybrid, the Prius. It, as Toyota officially forecast last December, it sells 3.34 million vehicles in 2007; it will overtake America's General Motors to become the world's biggest automobile manufacturer.

Toyota is, equally, already the best customer on the planet. For almost 70 years J.D. Power and other research firms have consistently rated Toyota

and its luxury line, Lexus, among the top automobile brands in terms of reliability, initial quality, and long-term durability. Toyota is also the most profitable car manufacturer. In the financial year that ended in March 2007 it made a profit of \$23.7 billion, whereas GM and Ford reported losses of \$1.87 billion and \$12.81 billion, respectively. In 2006, Toyota's market capitalization on May 16, 2007 – of \$194.71 billion – was more than one and a half times GM's \$124.46 billion, Ford's \$15.76 billion, and DaimlerChrysler's \$99.27 billion combined.

In the history of the modern corporation, Toyota's march to the top from its humble beginnings as a textile machinery manufacturer in the mill town of Toyota in near Toyota City is one of the most remarkable examples ever of managing for the long term. Toyota's rise wasn't guided or inevitable. Even in the early 1980s Ford and GM

The Long-Term Growth Strategy

In 2006 Toyota President Katsuaki Watanabe unveiled the full extent of Toyota's ambitions.

The company strategy puts equal emphasis on taking in opportunities and avoiding or absorbing risks; it utilizes global car models and also regional models. With global models such as the Lexus, the Camry, and the Corolla, and regional models such as the Crown (Asia) and the Tundra (North America), Toyota will offer a full line of appropriate vehicles in all the world's markets.

LESSONS FROM TOYOTA'S LONG

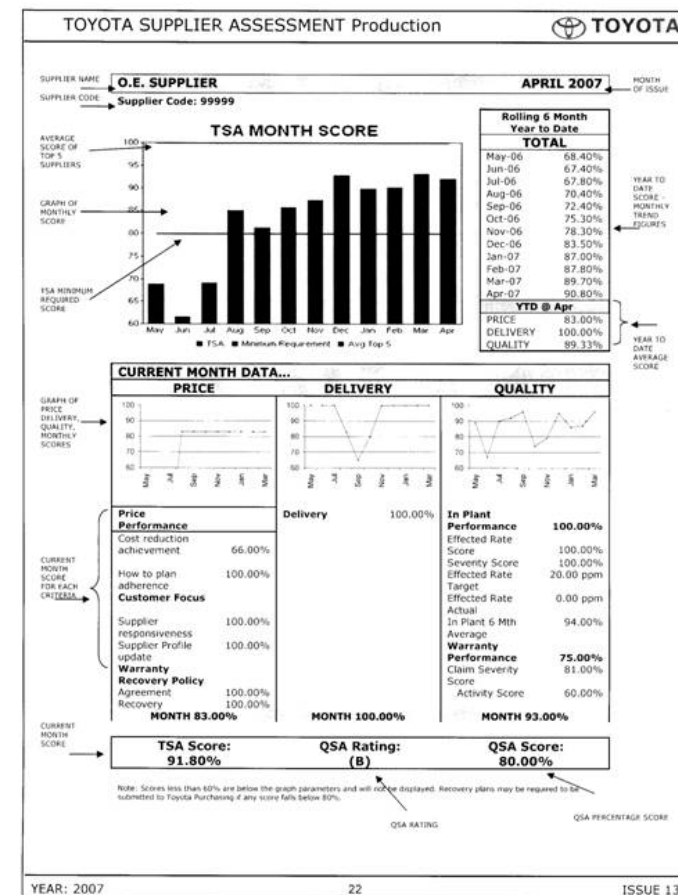
34 Harvard Business Review | July-August 2007 | hbr.org

He called for 50% Cost Downs and 50% increase in market share from 10% (did 13%) through ‘Simple, Slim and Speedy’ philosophy. Shochiro Toyoda lambasting Watanabe for his “stupidity”

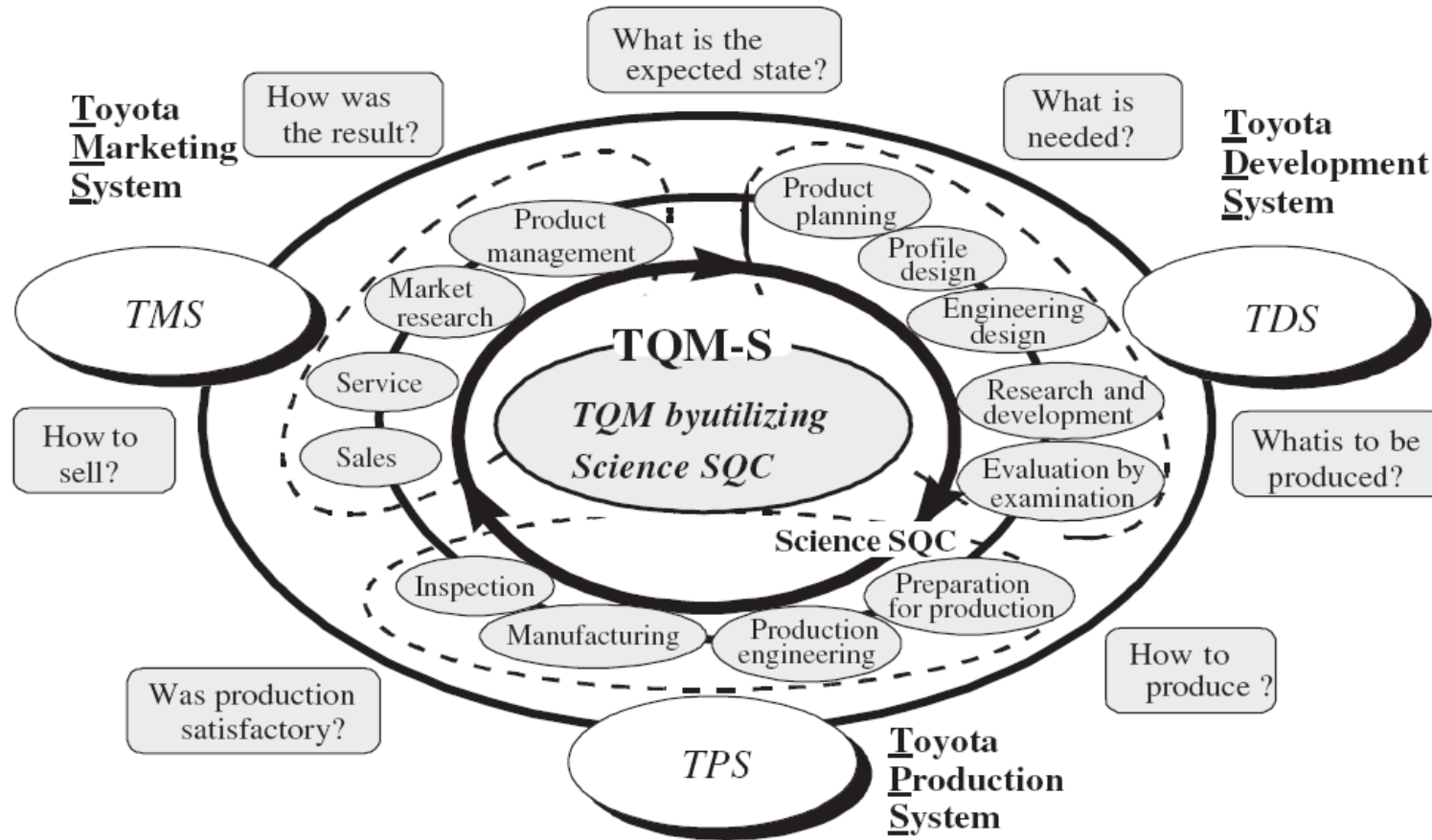
TMC Supplier Assessment – Price 1st. This may change perhaps?

The basic purpose of TPS is cost reduction – so a “bad” price assessment can mean the supplier is “poor” in TPS activities

New President Akio Toyoda, ‘changed out’ 50% of the Exec’s in April 2009 and set the challenge of “Toyota quality at 30% lower cost – that is the challenge”



Amasaka on Toyota 'Systems' and SQC



“Applying New JIT—Toyota’s global production strategy: Epoch-making innovation of the work environment”.
 Kakuro Amasaka. Japan “Robotics and Computer-Integrated Manufacturing 23 (2007) 285–293

The view of the 3 causes of Toyota's problems from Japanese quality and productivity sensei

1. *“There are two suppliers of the accelerator unit. In Japan it is Aisin in the USA it is CTS. So the accelerator issue has come from the US supplier – not Aisin! However, they are still a Toyota group supplier, and thus still is a Toyota quality issue.*
2. *Toyota's “slight” shift of focus over the past number of years from quality, quality, quality to cost reduction. Sales at the upper end of the market are drying up and moving towards the lower end of the market. Margins are much lower at this end. Competition from China, Korea, etc have put a lot of pressure on Toyota to drive out cost in this segment.*
3. *The development of internal competition between Toyota and Lexus. Lexus have been moving away from the TPS framework a little and into a new zone. Toyota has felt compelled to keep up with its more expensive brother and thus has been playing around with its own steadfast system”. 23 02 2010*

A TMC Australia and non 'Family' Supplier current issues on a TMC design fault & responsibility

“We have a new product for TMCA and have some small design changes which must be approved by Toyota in Japan. We have found that it can take up to 3 months to get the simplest of minor design changes passed off.

*We have been aware of a squeak issue coming from a part, and although it was originally discovered in Japan, Toyota will not share their info on how they addressed it with us. Weirdly, we have had a **zero defect rating and only one Quality complaint in the three years!***

They insist we find the root cause and fix it, and when we refused saying that our parts meet all the TMCA print requirements and are not prepared to spend any more money trying to fix a problem that has existed in the original design in Japan, then all of a sudden a very low level person from Toyota tries to then advise us how to fix it at our costs, well we sent him on his way and said we are not prepared to implement a Toyota fix at our cost.”. 12 04 2010



Toyota's Action Plan in response to various recalls



President Akio Toyoda says he will personally lead quality improvement efforts.

- (Toyota Motor Sales: Torrance, CA) -- Toyota Motor Corp.'s president, Akio Toyoda, spoke at a press conference on Friday, Feb. 5, in Nagoya, Japan. Toyoda expressed his deep regret for the inconvenience and concern caused to their customers. He also announced that he personally will take the lead toward improving quality around the world by establishing a global quality task force that will conduct quality improvement activities region by region.
- The committee headed by Toyoda will have a six-point action plan:

TOYOTA MOTOR SALES | 02/05/2010

<http://www.qualitydigest.com/inside/quality-insider-news/tmc-details-approach-quality-related-matters.html>



Toyota's Action Plan in response to various recalls



President Akio Toyoda action plan.

- **1. Improve quality inspection process.** Toyota will inspect again every process, while verifying the causes that led to the recalls, including quality in:
 - Design
 - Production
 - Sales, and service.
- **2. Enhance customer research.** Toyota will enhance the customer information research offices in each region to collect information faster.
- **3. Establish an “Automotive Center of Quality Excellence.”** To further develop qualified quality management professionals, an “Automotive Center for Quality Excellence” will be established in every key region.



Toyota's Action Plan in response to various recalls



President Akio Toyoda action plan.

- **4. Support from outside experts.** Toyota will seek confirmation and evaluation from outside experts—in line with the industry's best practices—of its newly improved quality control management, based on the above improvements.
- **5. Increased communication.** In addition, Toyota will work to increase the frequency of communication with regional authorities.
- **6. Improve regional autonomy.** To provide customers with satisfying products in each and every region, Toyota has long promoted the autonomy of its regional subsidiaries. They intend to further enhance this autonomy, listen carefully to each and every customer, and improve quality.



Toyota's Action Plan in response to various recalls



Toyota Details Approach to Quality-Related Matters

Company outlines measures for improving product quality, creates Special Committee for Global Quality

- (Toyota Motor Corp.: Tokyo) -- At a press conference on Feb. 17 in Tokyo, regarding quality related issues, the Toyota Motor Corp. (TMC) announced the following:
 - Japan-market recall progress**
 - The company has completed preparations for recall repair for the Toyota "Sai" and Lexus "HS250h," and its dealers began notifying owners today about the recall procedures.



Toyota's Action Plan in response to various recalls



Toyota Details Approach to Quality-Related Matters

- **Electronic throttle control technology safety**
- The TMC's electronic throttle control system incorporates overlapping fail-safe features linked to several sensors.
- TMC has commissioned an independent, third-party research organization to test its electronic throttle control system. The TMC will release the findings of that testing as they become available



Toyota's Action Plan in response to various recalls



Toyota Details Approach to Quality-Related Matters

- **Measures for improving product quality**
- The TMC will appoint a person to the post of chief quality officer for each principal geographical region to make the company more alert to customer sentiment. Such officers will serve on the company's newly established Special Committee for Global Quality. That committee, to be headed by the TMC's president, is for steering the company's quality-improvement activities onto a new and higher plane. The Special Committee for Global Quality will hold its first meeting on March 30.
- The TMC will ask independent third-party experts to review the contents of that meeting.



Toyota's Action Plan in response to various recalls



Toyota Details Approach to Quality-Related Matters

- **Measures for improving product quality cont'd**
- In another initiative, the TMC is strengthening its framework for conveying customer input from each region directly to its quality group and to its product development group to translate that input more promptly into quality improvements in products. The initiative will get under way first in the United States, where the TMC will expand its network of technical offices to fine tune its information gathering capabilities in an aim to be able to conduct on-site inspections within 24 hours of every reported incident of suspected product malfunction



Toyota's Action Plan in response to various recalls



Toyota Details Approach to Quality-Related Matters

- **Measures for improving product quality cont'd**
- The TMC will add a brake override system, which cuts engine power when the accelerator and brake pedals are applied at the same time, to all future vehicle models worldwide.
- The TMC will more actively use on-board event data recorders, which can, in the event of a malfunction, provide information necessary for conducting such activities as technological investigations and repairs.



Toyota's Action Plan in response to various recalls



Toyota Details Approach to Quality-Related Matters

- **Measures for improving product quality cont'd**
- The TMC, sincerely taking to heart customer feedback gained through *genchi genbutsu*, reaffirms—along with its dealers, suppliers, and employees worldwide—its commitment to unwavering quality in products and services and to the spirit of “customer first.” The TMC will continue to endeavour to provide products that are safe and reassuring.

<http://www.qualitydigest.com/inside/quality-insider-news/will-toyotas-recall-severely-impact-customer-satisfaction.html>

[ASIA newsreel business](#)

- AUTOS APRIL 15, 2010, 11:45 P.M. ET

Toyota Expands Tests to All Its SUV Models

Toyota Motor Corp., striving to take the high road on quality issues, said Thursday it would expand safety testing to all of its sport-utility vehicles, after suspending U.S. sales of its Lexus GX 460 amid rollover concerns.

The car maker also decided to suspend sales of the 2010 Lexus GX 460 in other countries where the luxury vehicle is sold and will halt production of the SUV for nine days beginning April 16 to prevent inventory levels from building up.

Toyota drew praise from the U.S. National Highway Traffic Safety Administration for taking "the proactive step" of offering owners of SUV's.

Already, Toyota's share of the U.S. retail auto market has plunged to 12.1% from 17.5% since its Jan. 21 recall of 2.3 million vehicles in the U.S. for a sticky gas pedal

Lutz described Toyota's travails as a "collective embarrassment of Japan Inc." He said it "may rob some of these brands of their social acceptability and coolness." In its latest recommendations, **Consumer Reports noted Honda's interior quality & fuel economy performance have declined.**

For several years, 3rd party quality assessments e.g. Consumer Reports' recommendations and research firm J.D. Power & Associates' customer satisfaction surveys -- have shown a steady improvement in the products of Toyota's rivals. **Toyota, Ford Motor Co. and GM's Chevrolet are virtually tied in J.D. Powers' latest ratings of initial quality.**

Yet competitors have struggled to make headway against Toyota in the U.S. market because of a so-called **perception gap**: Shoppers consider Toyota the gold standard among the mass producers.

"That perception gap has been cracked," said James Bell, an analyst at Kelley Blue Book, which tracks consumer preferences. "Shoppers who identify themselves as **Toyota owners are looking at other brands, and people who don't own a Toyota are not considering the automaker.**"

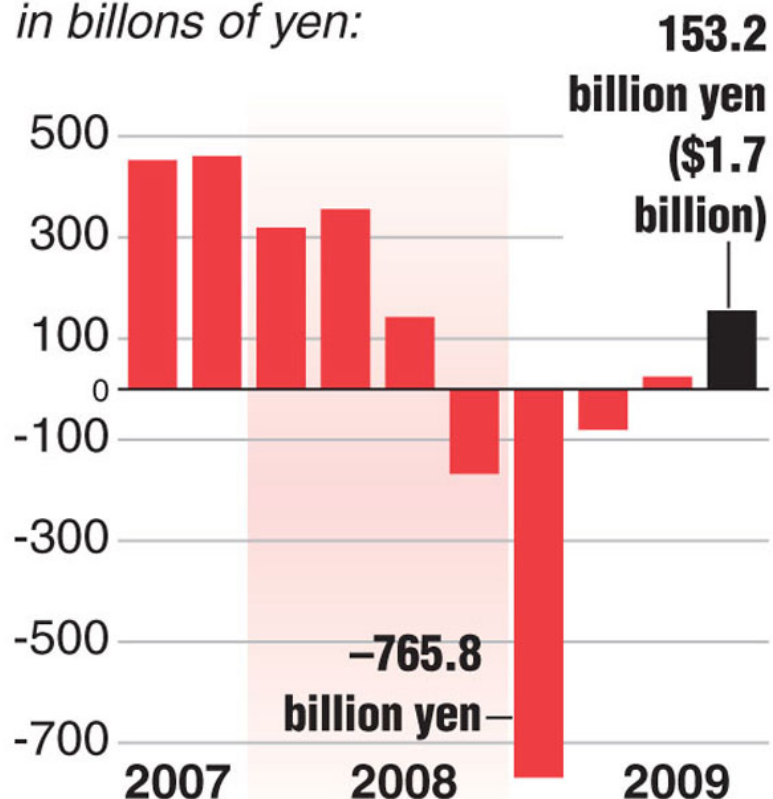
A year ago, **Consumer Reports recommended 22 of the 25 Toyota products it tested, more than any other manufacturer. This year it recommends 13 of 26 Toyotas.**

Because loyalty plays such a big role in auto purchases -- **on average about 50% of shoppers buy the same brand they already own** -- a shift of a few percentages points in market share between companies can have ripple effects that resonate for years.



<http://www.japantoday.com/category/business/view/toyotas-global-sales-fall-in-fy-2009>

Toyota reported a profit for the quarter that ended Dec. 31, 2009. Quarterly earnings, in billions of yen:



Toyota's global sales fall in FY 2009

Tuesday 27th April, 04:08 AM JST, NAGOYA — Toyota Motor Corp, still reeling from the fallout of its massive global recalls, said Monday its **worldwide auto sales in fiscal 2009 fell 1.4% to 7,291,000 units, declining for the second straight year.** Sales in the year to March 31 appear to have been hit by its tainted brand image and the worldwide recession, industry watchers said.

Sales dived 10.4% to 1,796,000 units in the United States, the automaker's biggest market, where the quality of its vehicles was harshly criticized in extensive media coverage of the recalls. European sales plunged 15.3% to 874,000 units but sales in Japan jumped 15.3% to 1,535,000 units, marking the first rise in five years thanks to tax breaks and government subsidies for environmentally friendly vehicles.

Among emerging economies, sales in **China soared 34.6%** to 759,000 units.

Source: Toyota Motor Corp.
Graphic: Pat Carr

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The World's Window on Japan
The Japan Times
ONLINE

Toyota plummets to 360th in Forbes ranking

NEW YORK (Kyodo) Toyota Motor Corp. has fallen to 360th in the Forbes ranking of the world's leading companies for 2010, plunging from third the previous year.

The sharp drop came after the automaker was hit by a spate of recalls worldwide and a decline in sales amid the global auto market slump.

Only three Japanese companies — NTT Corp., Mitsubishi Corp. and Honda Motor Co. — were ranked in the top 100, compared with 11 the previous year, indicating the diminished presence of domestic firms in the global economy. NTT was ranked 41st, Mitsubishi 78th and Honda 86th.

Major financial groups also fell in the rankings, hit by deteriorating earnings, with Mitsubishi UFJ Financial Group Inc. dropping to 369th from 21st.

China, moving in the opposite direction, had seven firms in the top 100, with Industrial and Commercial Bank of China ranked fifth.

[JPMorgan Chase](#) topped the rankings, followed by [General Electric](#) and [Bank of America](#).

<http://www.detnews.com/article/20100318/AUTO01/3180451/J.D.-Power-study--Improved-durability-of-cars-goes-unnoticed>

Last Updated: March 18. 2010 1:47PM

J.D. Power study: Improved durability of cars goes unnoticed

Demonstrates the points that: quality improvements can be noted in the **Initial Quality Survey (IQS)** at JD Power in 2-3 years, but the **Vehicle Dependability Index (VDI)** can require a decade or even more of unrelenting work for marketplace results.

2010 Long-Term Dependability Study, 25 of 36 brands improved their overall quality.

"It takes considerable time to positively change consumer perceptions of quality and dependability -- sometimes a decade or more -- so it is vital for manufacturers to continually improve quality and also to convince consumers of these gains," he added.

"It takes a long time build positive feelings about a brand and very little time to destroy it," said Ed Kim, an automotive analyst for AutoPacific Inc.

Industry wide, there was a 7 percent improvement in long-term durability. The study looks at 198 different problems, It determines quality by # of problems/vehicle has per 100 vehicles. The lower # = better. Of 18 categories, Japanese carmakers = 9 had nine vehicles ranked the highest. American carmakers had 7 and European carmakers had three.

The New York Times

Moody's Cuts Toyota's Credit Rating

By BETTINA WASSENER

Published: April 22, 2010

HONG KONG — The ratings agency Moody's cut Toyota's credit rating on Thursday, a move that underscored the immense financial fallout from the millions of vehicle recalls .

Moody's downgraded Toyota to Aa2 from Aa1, and maintained a negative outlook on the company.

“The rating action reflects the **ongoing low level of profitability evident at Toyota**, and which we expect to continue for an extended period,” and “material risk that its operating profit margin will remain well below that appropriate for its rating level until 2012 at the earliest and possibly beyond “said Tadashi Usui, a senior analyst at Moody's.

Moody's said Toyota's strong balance sheet, its large cash reserves and the leading positions it continues to hold in its key markets would help **Toyota remain the leading global auto maker in coming years..**

“ There is real risk that its product quality problems have eroded significantly and permanently its **historical advantages in pricing power,**”

Hyundai also said it is offering customers rebates if they traded in their Toyota vehicles; ¼ sales up 39%.

Auto Industry Future



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http://www.caranddriver.com/news/shows/2010_beijing_auto_show



Lessons for CI, ISO Stds, Lean and Six Sigma™ roles



Executives	Strategy, Stakeholders Systems/ICT/ERP Society Strategic Plan Scorecards Value Chain Management Review Sustainability	PESTEL, SWOT, Business Model Benchmarking, Core Competence Breakthrough Improvement (Juran) Balanced Scorecard/MBO/Metrics Management Processes Process Ownership Organisation Structure Capital Resourcing CSR Reporting
Managers	Products Business Planning Processes Value Stream Map People Performance Layered Audits Visual Management	Advanced Product Quality Planning D & PFMEA, PPAP, (P) Control Plan ABC : Price – Margin = Target Cost CoQ/CTQ, Supplier QA/QE Project Management Succession Planning Lean Flow and TAKT Time Levelling, ToC, TPM
Staff	Action Planning Standardised Work Value Analysis Value Engineering Kaizen Quality Circles Internal Audits	Industrial housekeeping/5S Process-approach QMS BP Modelling Notation Process Charting – V & NVA SPC – Stability THEN Capability Basic 7 QCC Tools = 95% of Problems ISO9K; C & P A (PDCA, PDSA, DMAIC)