## Agenda

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Subject</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.15</td>
<td>8.45</td>
<td>JTEKT Global Direction</td>
<td>Ken Hopkins.</td>
<td>COO</td>
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<tr>
<td></td>
<td></td>
<td>JNA on path to Excellence</td>
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<tr>
<td>8.45</td>
<td>9.05</td>
<td>Customer Voice</td>
<td>Gary Bourque.</td>
<td>VP Sales</td>
</tr>
<tr>
<td>9.05</td>
<td>9.20</td>
<td>N.A Manufacturing roadmap</td>
<td>James Gregory.</td>
<td>SVP Manufacturing</td>
</tr>
<tr>
<td>9.20</td>
<td>9.40</td>
<td>Purchasing Strategy</td>
<td>Christelle Orzan.</td>
<td>SVP Supply Chain</td>
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<tr>
<td>10.00</td>
<td>10.15</td>
<td>Collaboration Tools</td>
<td>Abel Acuna.</td>
<td>GM Purchase Planning</td>
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<tr>
<td>10.15</td>
<td>10.40</td>
<td>Supplier Quality</td>
<td>Antonio Vaz.</td>
<td>Director Quality</td>
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<td></td>
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<td></td>
<td>Alex Thomas.</td>
<td>Mgr Supplier Advancement</td>
</tr>
<tr>
<td>10.40</td>
<td>11.10</td>
<td>Direct Material roadmap</td>
<td>David Britton.</td>
<td>Purchasing Mgr Components</td>
</tr>
<tr>
<td>11.10</td>
<td>11.40</td>
<td>Supplier Awards</td>
<td>Freddie Bleeks.</td>
<td>GM Purchasing</td>
</tr>
<tr>
<td>11.40</td>
<td>12.00</td>
<td>Q&amp;A Panel</td>
<td></td>
<td>Closing Comments</td>
</tr>
<tr>
<td>12.00</td>
<td>1.30 p</td>
<td>Lunch</td>
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<td></td>
<td></td>
<td>Afternoon</td>
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<tr>
<td></td>
<td></td>
<td>Breakout meetings</td>
<td></td>
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<td></td>
<td></td>
<td>Golf activity (Tee time 2pm)</td>
<td></td>
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<td></td>
<td></td>
<td>Visit to JTEKT Greenville Tech Center (Bus leaves at 1.30pm)</td>
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</tbody>
</table>
Non Disclosure Statement

This presentation contains material non-public information concerning the JTEKT North American business which is highly confidential. Please do not disclose such non-public information outside of the Supplier Conference. In addition, forward-looking sales and production information contained in this presentation is based on the current beliefs and assumptions of management. Actual results could be materially different from the information contained in this presentation.

Thank You
JTEKT North America
On the Path to Excellence

Ken Hopkins
Chief Operating Officer

Numbers are 100M Yen
Shaping a Better Future through the Spirit of “No.1 & Only One”

We will be an invaluable partner with our customers, our suppliers, and our team members. We will deliver “No.1, Only One” products and services through “Building Value,” “Building Excellent Products,” and “Building Professionals.”

Building Value
Provide value to customers by delivering products and services that exceed their expectations.

Building Excellent Products
Astonish the world with “Monozukuri,” the art of refined craftsmanship and superior quality.

Building Professionals
Develop a team composed of individuals working together, acting with initiative, confidence, pride, and passion as global members of JTEKT.
JTEKT Global Footprint

Global Reach, Global Products

82 Manufacturing Plants Across the Globe
Sales Offices in Over 35 Countries
8 Tech Centers Globally

Partners in Performance – JTEKT North America 2014 Supplier Conference
JTEKT Market Leadership

NA AWD Coupling Marketshare
- JTEKT 20% share

Global EPS Marketshare
- JTEKT 31% share

Global Bearing Marketshare
- JTEKT 10% share

#1 in AWD Couplings – North America
#1 in Electric Power Steering - Global (31% of EPS share & 39% of C-EPS)
#1 Automotive Bearings Supplier - Global

#17 Largest Part Supplier Globally to Automotive Market

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### Global Expansion

<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>News</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/22/2014</td>
<td>China</td>
<td>JTEKT starts a local production of Pinion-EPS</td>
<td>In addition to Column EPS</td>
</tr>
<tr>
<td>5/15/2014</td>
<td>China</td>
<td>New location JRDC(Tech. Center in China)</td>
<td>New building</td>
</tr>
<tr>
<td>4/25/2014</td>
<td>Japan</td>
<td>R&amp;D center for large size bearings</td>
<td>Opening and start of operation</td>
</tr>
<tr>
<td>3/25/2014</td>
<td>Brazil</td>
<td>JTEKT starts a local production of EPS</td>
<td>In addition to HPS and MS.</td>
</tr>
<tr>
<td>12/24/2013</td>
<td>Mexico</td>
<td>Establishment of the first manufacturing plant in Mexico</td>
<td>Steering Systems</td>
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</tbody>
</table>

JTEKT Steering Plant in Mexico
- Opening end of 2015
- $91M investment
- Manufacture EPS
- Planned 300 team members
Integration

In 2010 JTEKT in North America (JNA)
• Koyo Ball and Roller Bearings
• Koyo Torrington Needle Roller Bearings
• JTEKT Steering & Driveline

INTEGRATION

JTEKT – One Company
– One Purchasing
– One Sales
– Common Benefit programs
– Common ERP systems (in 3 Phases)

– One Finance
– One Manufacturing
– One Quality
– One Supply Chain

Partners in Performance – JTEKT North America 2014 Supplier Conference
Projected NA Sales Growth
Culture – Shaping the Future

JTEKT WAY

SUSTAINABLE SUCCESS

PEOPLE
PRODUCT
PROCESS
PASSION

Partners in Performance – JTEKT North America 2014 Supplier Conference
Teamwork & Partnership

Manufacturing

Product Engineering

Financial

Organization System & People

Purchasing & Supply Chain

Market Approach

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Key points:
From 2001 – 2009, regional sales eclipsed output by 27% or 3.7 million units
2012 – 2021, future sales levels outpace production by less than 8% or by 1.3 million units
Partners in Performance

JTEKT Auto Bearing Sales vs Automotive Market

![Bearings Sales in Automotive graph](image)

JTEKT Ind Bearing Sales vs Industrial Market

![Bearings Sales in Industrial graph](image)

Key points:
Solid market growth - we are in a strong economic growth cycle
JTEKT Bearing Sales in the Automotive and Ind. market exceeds market growth

– JTEKT North America 2014 Supplier Conference
Winning Formula for Partnership

Quality  Safety
Cost  Continuous Improvement

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JTEKT North America
The Customer Voice

Gary Bourque
Vice President, NA Sales
Sales By Customer – FY13

Automotive – BBU and ASBU

- TOYOTA: 35%
- CHRYSLER: 12%
- GENERAL MOTORS: 10%
- NISSAN: 16%
- FORD MOTOR: 9%
- HONDA: 1%
- AMERICAN AXLE: 3%
- EATON: 2%
- OTHERS: 12%

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Partners in Performance – JTEKT North America 2014 Supplier Conference

Sales By Customer – FY13

Industrial – BBU

- JOHN DEERE AND SUBBERS, 16%
- GE WIND, 5%
- MOTION, 4%
- OKAYA, 4%
- GE HEALTH, 3%
- CATERPILLAR, 4%
- APPLIED, 4%
- GATES, 2%
- SKF USA, 2%
- EATON, 2%
- OTHERS, 55%
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BBU and ASBU – OBP 2014

OBP 2014

FY13 Result  FY14  FY15  FY16  FY17

BBU - AUTO OE  BBU - IND  ASBU
2013 → 2018 Product Mix

**2013 Steering**
- C-EPS: 58%
- H-EPS: 22%
- HPS: 20%

**2018 Steering**
- C-EPS: 39%
- H-EPS: 27%
- HPS: 11%
- R-EPS: 4%

**AUTO 2013**
- TRB: 22%
- HUB: 15%
- NRB: 42%
- Other: 21%

**AUTO 2018**
- TRB: 22%
- HUB: 27%
- NRB: 35%
- Other: 16%

---

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Customer Requirements

- Consistent focus on Quality, Delivery, Cost, and Technology
  - 0 PPM
  - 100% On time delivery
  - ~3% APR
  - New technology
- Warranty Sharing
- Shift to Global Platforms
The auto industry’s growth is expected to come from “Mega Platforms”, which are forecasted to increase by 63% in the next 5 years.

**Vehicle Volume By Platform Scale**

- **2012**: 31MM units or 37% of global production
- **2018**: 50MM units or 48% of global production

**Top-10 Platforms – Forecast Volume 2017**

<table>
<thead>
<tr>
<th>#</th>
<th>OEM</th>
<th>Platform</th>
<th>Vol. (MMs)</th>
<th># Models</th>
<th>Example Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volkswagen</td>
<td>MQB A/B</td>
<td>4.5</td>
<td>25</td>
<td>A3, Golf, Jetta, Passat, Octavia, TT, Q4</td>
</tr>
<tr>
<td>2</td>
<td>Toyota</td>
<td>MC-M</td>
<td>3.3</td>
<td>22</td>
<td>Camry, Prius, RAV4</td>
</tr>
<tr>
<td>3</td>
<td>General Motors</td>
<td>DELTA</td>
<td>2.6</td>
<td>18</td>
<td>Astra, Cruze, Captiva, Equinox</td>
</tr>
<tr>
<td>4</td>
<td>Volkswagen</td>
<td>PQ25</td>
<td>2.1</td>
<td>16</td>
<td>Fabia, Polo, Gol, Santana</td>
</tr>
<tr>
<td>5</td>
<td>Hyundai</td>
<td>PB</td>
<td>2.0</td>
<td>12</td>
<td>Verna, Pride, Soul, Click</td>
</tr>
<tr>
<td>6</td>
<td>Renault/Nissan</td>
<td>B</td>
<td>1.8</td>
<td>23</td>
<td>Clio, Sentra, Juke, Tiida</td>
</tr>
<tr>
<td>7</td>
<td>Ford</td>
<td>B2E</td>
<td>1.8</td>
<td>7</td>
<td>Fiesta, B-MAX, Ecosport</td>
</tr>
<tr>
<td>8</td>
<td>Toyota</td>
<td>MC-C</td>
<td>1.7</td>
<td>9</td>
<td>Corolla, Auris</td>
</tr>
<tr>
<td>9</td>
<td>Renault/Nissan</td>
<td>B0</td>
<td>1.7</td>
<td>13</td>
<td>Logan, Duster, Dokker, Sandero</td>
</tr>
<tr>
<td>10</td>
<td>Renault/Nissan</td>
<td>CMF1</td>
<td>1.6</td>
<td>19</td>
<td>Megane, Qashqai, Rogue, Scenic, X-Trail</td>
</tr>
</tbody>
</table>

**TOTAL**: 23.14 MM, 164 models

The global platforms account for most the growth; fundamental "to be part of" as a supplier.

Source: IHS, AlixPartners Analysis
From The OEMs’ Perspective, Three Main Benefits Arise (More from Variants/Platform Than From Plants/Variant)

**Engineering Costs**
- The initial engineering spend of the platform or modules for multiple variants will be higher than for just one variant.
- An advantage of platform is in lower costs associated with the component engineering of subsequent variants.
- Vehicle integration costs have some puts and takes.

**Tooling Costs**
- Two categories of spend:
  - OEM tooling/ facilities for stamping and final assembly
  - Suppliers tooling for component fabrication
- Tooling driven by the number of production/supplier plants and the number of variants of a design within each plant.

**Material Costs**
- Cost impact of extra volume in same plant and more effort on Value Eng.
- Different components and manufacturing operations follow different cost curves.
- Current high volume platforms are already supporting 1 million+ vehicles so variable cost improvement above that volume is muted – The trigger points for alt. mfg methods varies by varies by commodity, so where the curve flattens varies substantially.
Top Impacts Of Platform Globalization

- Higher stakes involved when suppliers bid on OEM programs, requiring increased global standards for accuracy of cost & profit data

- The changing dynamics of supplier-OEM collaboration and global platforms are leading to earlier sourcing and longer partnerships
  - Platform may be in production somewhere for 10+ years

- Suppliers must have global organization and strong key account management in order to align with the requirements of OEM customers

- Common parts supplied from multiple locations will drive suppliers (and OEMs) to adopt globally common systems and processes
  - Quality issues can become real big, real fast

- Maintaining service-parts supply for global platforms presents new challenges that must be considered when quoting new business

- Global platforms will accelerate continued consolidation in the supply base
  - Global footprints are required to win
Summary

• Consistent Sales Growth since 2010
• Very diversified customer base
• Changing technology
• Demanding customers in competitive market
• Globalization
JNA Manufacturing update

James Gregory
Senior VP Manufacturing
JTEKT NA Mfg Locations

- Ennis
- Vonore (+ plt 2)
- Morristown
- KAF
- Washington
- Bedford
- Greenville Technical Center
- Richland
- Orangeburg
- Sylvania
- Piedmont
- Dahlonega
- Walhalla
- Cairo
- SLP Mexico

Bearing
Steering
Driveline
### JAMX – Mexico Plant

| **• Company Name**                  | JTEKT AUTOMOTIVE MEXICO, S.A. DE C.V.                                      |
| **• Location**                     | San Luis Potosi, Mexico                                                    |
| **• Investment Amount**            | US$ 90 million                                                             |
| **• Number of Employees**          | About 300 (2016)                                                           |
| **• Production Capacity**          | 900,000 units / year                                                       |
| **• Land Area**                    | Approx. 204,000 m²                                                         |
| **• Plant Area**                   | Approx. 19,000 m²                                                          |
| **• Start of Operation**           | The end of 2015                                                             |
| **• Completion of Construction**   | April 2015                                                                 |
| **• Business Description**         | Manufacturing and Sales of Electric Power Steering (Mexico OEMs)          |
Safety First / Quality Always!

- **OSHA (average TRIR by industry):**
  - Iron and Steel Forging: 9.8
  - Steering and Suspension Components: 6.1
  - Transmission and Power Train: 4.8
  - Ball and Roller Bearing: 3.8
  - Motor Vehicle Parts Manufacturing: 5.3
  - All Manufacturing: 4.1
  - Top Quartile of Manufacturing: 2.3
  - **JNA YTD (Apr-Jun):** 1.2

- **JTEKT NA target (TRIR):**
  - FY2014 Target (from 1.31 in FY2013): 1.01
  - **JNA YTD (Apr-Jul):** 1.19

- **JTEKT Japan benchmark (frequency per 1M hours):**
  - JTEKT Japan Plants FY2013: 0.95
  - **JNA YTD (Apr-Jul):** 2.08
JNA 2015 Manufacturing Hoshin: Quality!

Manufacturing Competitiveness
Gaps & Focus
- Annual Hoshin activity
- OBEYA analysis

Quality
- Zero flow-out!
- Stop-Call-Wait
- Change Point Control
- TQM – engaged employees

Skills
- JPS “Athletes”
- Training
- Succession Planning

Maintenance
- Std PM system / KPIs
- Skill/Apprenticeship
- Process capability

Capital: Speed & Efficiency
- Common approval system
- NA PE leverage
- Approval leadtime

Bekido/Chokko Improvement
- JTEKT Production System
- IC workshops
- 8 step problem solving

Supplier Performance
- Purchasing/Quality effort
- Hands on activities
- SAE / SQD

Growth: New item launch
- Quality Gate 20
- Launch resources
- Capacity planning

Mother Plant Communication
- Build peer level channels

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JTEKT Production System

Bekido

Chokko

Yarianmai

1. PROBLEM STATEMENT
   Background information regarding the theme of the problem. Can you see a current PDCA cycle

2. CURRENT SITUATION
   Basic information regarding the problem area. Examples: Line Load, Line Performance, Volumes, Staffing...
   Looking for "GAPS" we may need to dive deeper into later

3. TARGET
   Initially "General" is ok, as Step#4 becomes more clear our target should get very specific

4. ANALYSIS
   Ishikawa Diagram, Factor Trees Analysis, 5 Why? 1 How?

5. ACTIONS
   ACTIONS may be put in place for getting more detail for "Root Causes", but we are looking for COUNTER MEASURES that address the Root Causes, Prioritized by "Big" or "Small", and "Easy" or "Difficult"

6. DO
7. RESULTS
   Completed by the customer, (O) Good impact, (△) Little, or no change, (X) Worse condition.

8. MAINTAIN
   Establish a PDCA to maintain improvement, don’t forget Yokoten opportunities
Inter-Company Kaizen Workshops

JNA Multi-Plant Activities
Inter-Company Kaizen Workshops

- Frequency: (2xMonthly)
- Who: Kaizen Group, Front Line Leaders
- Size: (8-20)
- Target: “Hands-on experience”

Expected Results:
A systematic approach to applying JPS techniques to our workforce needs, that can be applied for continuous improvement at all plant levels. This becomes our foundation for TQM
PDCA Example

Koyo.

Bottleneck Cycle Time

Chokko

TOR#2

Pc

Apr 19.6 May 20.3

Jun 157 Jul 171

Aug 127 Sep 135

Oct 150 Nov 152

Dec 165

2008
Our Vision of Commitment to Suppliers

Work Jointly to Improve Delivery and Quality as We Grow Together!

• Improve Communication between plants and suppliers
  ► Please give advanced notice of any quality, capacity or delivery issue

• Grow / Develop plant SQE resources
  ► Do you have dedicated improvement resources?

• Accelerate “Hands-On” Problem Solving workshops
  – Step 1: JTEKT SAE’s & SQE’s through our Inter-Company Workshops
  – Step 2: Charge SAE’s with engaging Suppliers at their plants with “Hands-On” Activities
  – Step 3: Evaluate success by survey of participants
  ► Please host and support workshops and engage in PDCA followup
Excited about working together with you to insure our future TOGETHER
Purchasing Direction

Christelle Orzan
Senior VP Supply Chain Management
JTEKT Purchasing - Global Footprint

Global Purchase Trend Over 2014

Almost $10 Billion by 2018

FY14 FY15 FY16 FY17 FY18

Purchase Amount ($ billion)

Japan: +8%
ROW: +28% over ‘14
N. A: +17% over ‘14

North America 2013 Spend $1.18 Billion

- Electronics 18%
- CKD 19%
- Forging/Mach’g 14%
- Castings 6%
- Steel 8%
- Indirect 9%
- Other (stamping, Assy...) 26%
Global Team

Europe

China

North America

Self Reliance

JTEKT JAPAN
(Purchasing Global Center)

Continuous Support

Asean

South America

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Japan Headquarters

– Provide Purchasing Policy to all Purchasing groups globally.
– Lead few global commodities strategy with regional input.
– Facilitate and support issues and concerns of each regions.
– Develop and coordinate tools, training, and events to increase the regions’ communication and collaboration.

North America

– Execute and develop activities based on global policy.
– Support the regional Business Unit Strategies.
– Develop sourcing selection, pricing, and agreements.
Your N.A Purchasing Team

Freddie Bleeks
GM Purchasing Components & Indirect

Abel Acuna
GM Purchase Planning

Patrick Grande
Steel Raw Material
Hot Forge
Machining
Aluminum Castings

Mike Rich
Investment castings
Cold Forge
Powder metal
Seals. Plastics
Heat treat

David Britton
Electronics
Hydraulics
Ball Joint
Jacket Assembly
Stampings

Alex Thomas
Supplier Develop’t
VA VE
New part launch
High profile events

Patrick Deligny
Chemical Mng’t
Large MRO
Corporate Services
MTP Tooling

75% New to JTEKT in last 2 years

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Reflection on the last 2 years

- Strong progress in N.A supply **localization**.
- **Integration** of some tools and KPI.
- New tools: e.g. **Risk Mng’t**, Advance Sourcing process,..
- Limited use and leverage of JTEKT global team.
- **Capacity** constraints in our supply base.
- Too many suppliers with fundamental **quality issues** and too many **high risk events**. Below expectations.
- Many new projects with minimal supplier engagement to meet **global cost competitiveness** (external & internal issue).
- New team members requiring **intense learning** and training.
2014-17 Purchasing Strategy

Global Direction

• Promote the **independence** of purchasing groups overseas: Level up **skills**.

• Build the world-best supply chain foundation: reconstruct **Quality** Assurance & increase **Global Cost Competitiveness**.

• Build **Risk Management** and **Multi-source Systems** that are immune to changes in circumstances.

---

*Partners in Performance – JTEKT North America 2014 Supplier Conference*
• Strengthen Organization: training, tools (i.e ERP) and adapt organization to changes and needs.
• Step up Supplier Performance in Quality.
• Implement targeted Programs with Suppliers: Mid-term plan for global competitiveness and ‘Kitaichi’
• Speed up Commodity Strategies: mitigation plans and global sourcing.
Opportunities for Suppliers

- Grow with upcoming new technology.
- Build stronger partnership: innovation ideas, more value-add (integrate process steps and supply chain).
- Participate in improvement workshops.
- Develop global footprint and global supply to all JTEKT entities.
- Develop footprint in Mexico.
Road to Success

Supplier wins sustainable Business and Growth

Supplier gets better in Cost, Quality, Delivery

Grow Together with Competitive Partner

Supplier improves its Global Competitiveness

Supplier practices, teach associates

Supplier Gap in Cost, Quality, Delivery

JTEKT supports with Tools

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Partners in Performance – JTEKT North America 2014 Supplier Conference

 Measure progress with ‘Kitaichi’

Kitaichi Definition: “Expected Achievement”

• Start Q4 2014 with selected suppliers (~ 10)

• Objective: Review Supplier performance and achievement of targets along the road.

• Overall Schedule
  – Monthly Reviews with your regular contacts
  – Half year review with GM level and Head of SAE
  – Annual Review with JTEKT Leadership

<table>
<thead>
<tr>
<th>SUPPLIER</th>
<th># Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. FY 2014 Top Issues and Priority</td>
<td></td>
</tr>
<tr>
<td>II. “Kitaichi” Expected Achievement and Actions</td>
<td></td>
</tr>
<tr>
<td>Results (value)</td>
<td>Comments</td>
</tr>
<tr>
<td>Safety</td>
<td>Zero fatal accident</td>
</tr>
<tr>
<td>Zero lost-day accident</td>
<td>0</td>
</tr>
<tr>
<td>Quality</td>
<td>Safety Score</td>
</tr>
<tr>
<td>1. Increase sales by 10%</td>
<td></td>
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<tr>
<td>Increase product’s life</td>
<td></td>
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<tr>
<td>Cost</td>
<td>(1) Achieve MI target by XXX</td>
</tr>
<tr>
<td>1. Develop lower cost sub component</td>
<td></td>
</tr>
<tr>
<td>1.2 Reduce operators per machine</td>
<td></td>
</tr>
<tr>
<td>1.3 Localize part X</td>
<td></td>
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<tr>
<td>Delivery</td>
<td>(1) Develop safety stock</td>
</tr>
<tr>
<td>Production</td>
<td>(1) Improve delivery</td>
</tr>
<tr>
<td>(2) Improve lead time</td>
<td></td>
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<tr>
<td>(3) Improve setup time</td>
<td></td>
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<tr>
<td>Engineering</td>
<td>(1) Install technology to achieve process Y</td>
</tr>
<tr>
<td>(2) Eliminate chatter</td>
<td></td>
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<tr>
<td>Risk management</td>
<td>(1) Countering measures to reduce risk factor</td>
</tr>
<tr>
<td>(2) Develop backup plan in event of current supply chain failure</td>
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3 Year Plan

<table>
<thead>
<tr>
<th>Part</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td>A</td>
<td>$</td>
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Actions & Measure

Top Priorities

Subjects to improve

Expectations

Kitaichi Document Example
Our Expectations to Level Up

• Reconstruct Quality Assurance System
  – JTEKT will support via small workshop to teach tools. Plants will improve communication with supplier.

• Achieve Global Competitiveness
  – JTEKT will support with detailed analysis of the competitive gap*. We will define together an improvement

• Level up to Strong Partner
  – JTEKT will support more VA-VE ideas.
  – We will jointly develop an Annual Improvement Plan <Kitaichi> with regular reviews.

* Using Global Market data, Benchmark, “Should be Cost”
Thank You

Only together can we reach and maintain World-Class Performance
Collaboration Tools

Abel Acuña
General Manager Purchase Planning
• Introduced JSN (JTEKT Supplier Network)
• JSN Web Portal provides suppliers a conduit how to do business with JTEKT, each supplier has dedicated secure site with password.
• Introduce more tools that will improve how we do business
Capacity Management

- Capacity Management
  - Capacity module tested
  - Core elements: Process Capacity & Tool Capacity

- Benefits
  - Increase responsiveness
  - Window of opportunity

- Results
  - Transparency in supply chain
  - No surprises
Capacity Management.

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**JSN SUPPLIER TOOL CAPACITY MODULE**

- **SUPPLY CHAIN NOTIFICATIONS (JANA)**
- **SUPPLY CHAIN WEBEX TRAINING SECESSION (1) & (2)**
- **GO LIVE**
- **SUPPLY CHAIN (JANA) DATA ENTRY ALLOCATION**
- **SUPPLIER RESPONSE DUE (JANA)**
- **SUPPLY CHAIN NOTIFICATIONS (KBNA)**
- **SUPPLY CHAIN WEBEX TRAINING SECESSION (1) & (2)**
- **SUPPLY CHAIN (KBNA) DATA ENTRY ALLOCATION**
- **SUPPLIER RESPONSE DUE (KBNA)**

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**STEERING & DRIVELINE**

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**BEARING**

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**Today**

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**Partners in Performance** – JTEKT North America 2014 Supplier Conference
• Request For Quote
  – Develop Web Based Module
  – Benefits:
    • Suppliers get prints from JSN Portal - better document control
    • Suppliers submit quotes responses directly onto JSN Portal
    • Improve response time
    • Facilitates standard work
    • Allow transfer of confidential documents
RFQ Web-Base Solution

JSN RFQ MODULE

- PROJECT PLANNING
- IT DEVELOPMENT
- TESTING
- DEBUG & ROLL OUT TO BUYER
- TRIAL RUN & BUYER
- COMMUNICATE TO SUPPLY
- GO LIVE

Jul-14 Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15

Web Based RFQ

Today

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Supply Chain Risk

Risk Management

• JTEKT method to assess supply chain risk is among leading industry practices

• 5 important categories JTEKT considers
  - Financial
  - Operational
  - Supply Continuity
  - Sourcing Vulnerability
  - Geographic

• Once per year we engage this process with you

• At the heart of JNA Risk Assessment is Supplier Data Sheet
  - Financial Data or Financial Ratio
  - We accept either method of calculation from suppliers
Supply Chain Risk

Last Years Status

- We appreciate your continued support to provide timely information, however we have room to improve.
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– JTEKT North America 2014 Supplier Conference

Summary Collaborative Tools

Improve partnership via better communication

– Capacity Mgt is important to servicing our customers, we look forward to improving current processes and practices

– Developing Web-based RFQ helps standard work and improves security and document control

– Critical support for Supplier Data Sheet is needed to protect all parties

SUPPLIER >> JTEKT >> CUSTOMER
Voice of Customer

Antonio Vaz
Director, Quality Management
Quality is.....

Quality

Product Quality

Design Quality (Target)

Product Quality (Performance)

Service Quality (Delivery, Cost, After Service)
Future is bright

Sources: Ward’s and Eaton Economics, updated June 16, 2014
Data (actual through 2014q1; forecast through 2014q4)
but we have concerns....

Traffic Jam
Car makers are clogging dealer service shops with record numbers of vehicle recalls, squeezing out more profitable service jobs. Total number of vehicles recalled in the U.S. by year

50 million .................................................................
40 ...........................................................................
30 ...........................................................................
20 ...........................................................................
10 ...........................................................................
0 ...........................................................................

1966  '70  '80  '90  '00  '10

*As of August 22
Source: National Highway Traffic Safety Administration

The Wall Street Journal

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JTEKT Commitment

Quality Policy

Mission Statement

We, through commitment to quality, supply products that will delight our customers.

Management Policies

1. Judge and act quickly from Customer’s perspective.
2. Execute built-in quality of design and manufacturing utilizing creativity and good ideas of our team members.
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Mass Production Philosophy

Process Stability

Need to Control Variation
JTEKT Way to Control Variation

- 4M Change Point Control
- Standard Work
- Training Dojo
- Total Preventive Maint.
- FIFO
- Jig Market (1st pc good)
- Production Board (Problem Visibility)
- Change-over System

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What you need to do...

Trust but Verify

“doveryai no proverya”
Susan Massie
Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives.
Supplier Quality
“Step Up”

Alex Thomas
Manager Supplier Advancement
“Step Up”

Quality Performance – DMR* Metric

DMR North America

DMR = Discrepancy Material Report

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“Step Up”

Defects by Type

- Visual: 43%
- Dimensional: 29%
- Metallurgical: 6%
- Functional: 7%
- Material: 8%
- Packaging: 6%
- Assembly: 1%
Main causes for visual and dimensional defects

- Poor problem solving – “Why made and why shipped”
- Inadequate Quality Systems – process control
GAPS in Systems leads to DMRs

- Robustness of quality planning – not preventing issues (i.e. lessons learned)

- Defects outflow – error proofing not adequate. In-process checks are not identifying problems.
Expectations for Supplier Improvements

• Manage your change points in the process or supply chain.
• Utilize quality control plan checks and audits to reduce process variation.
• Use mistake or error proofing to detect defective material or parts to prevent outflow.
• Submit complete PPAP packages (inc. IMDS* thru online system)
• JTEKT can provide support thru supplier workshops and tutorials on the JSN supplier portal – HELP section.

*IMDS = International Material Data System for Automotive Suppliers
SQAM – Revision 5 released on June 2014

• 1.3 – Need to designate a “Safety Officer” within your company.

• 10.7 – Added JTEKT’s “Global Environmental, Health & Safety” policy statement for reference.
**Major Changes in Systems**

**GQTS (Global Quality Tracking system)** or **DMR (Discrepant Material Report)**

- 3 loops instead of 2 – improve discussion and interaction

**Loop A**

- D1 – D3
- In this step, the supplier shall submit a first response (team/person assigned, problem description, containment actions)
- The first 3D report shall be supplied to JTEKT within 24 hours.

**Loop B**

- D4 – D6
- In this step, the supplier shall submit D4-D6 (root cause, corrective actions).
- In this step, the supplier can still also update points D1-D3 in order to report for example results of containment actions.
- First 6D report shall be submitted to JTEKT within 5 calendar days.

**Loop C**

- D7 – D8
- In this step the supplier shall submit D7-D8.
- A complete 8D report shall be submitted to JTEKT within 14 calendar days or agreed upon date.
Major Changes in Systems

Did you “read across or Yokoten”?

Loop C
D7-D8

LINE 1

LINE 2

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In Summary........

- Suppliers represent ~70% of our product content.
- Quality and Service is very important to our business.
- If gaps exist.....you are the leaders who have to:
  - engage the process,
  - define the problem,
  - and fix it to avoid shipping defects.
Direct Material Roadmap
September 10, 2014

David Britton
Purchasing Manager
5 Year Direct Material Spend

Extensive Growth Over Short Period

Steady State – QCD Improvement

$ thousands


Bearing  Steering/Driveline  Potential

– JTEKT North America 2014 Supplier Conference
Technology Roadmap

2018
ITCC Disconnect

2017
Rack Parallel Steering

2016
Dual Pinion Steering

2015
CVJ (Constant Velocity Joint)

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Aluminum Commodity

High Pressure Die Casting – JTEKT aluminum usage (Metric ton / year)

Projected additional outsourcing requirements (USA + Mexico):
• Supplier capacity to process additional 4,000 MT/year by 2018
• New technology / part design (dual pinion, rack parallel)
Hot Forging

JTEKT steel usage (Metric ton / year) – Hub bearing production – Richland plant

- Global sourcing for raw material and forgings
- From 3.8 Million bearing units in 2013 to 8.9 Million bearing units in 2017.
Opportunities
Hot / Cold Forging

JTEKT Steering – Ball Nut Screw requirements – Number of pieces

• New component sourced by JTEKT for the launch of the rack parallel technology.
• Global sourcing for forging / machining
• Initial evaluation: North American suppliers are capable to meet JTEKT requirements.
• Partnership approach with a supplier to meet quality and cost targets at SOP.
Opportunities: Cold Forging/Machining

- Current
- JF Inner
- Tripod
- JF/JPL Outer
- Pinion
- EPS Sensor Shaft
- Large Pulley
- Gear Drive
- Gear Driven

Year: 2014, 2015, 2016, 2017, 2018

Pieces (000s): 8000, 8500, 9000, 9500, 10000, 10500, 11000, 11500, 12000, 12500

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JTEKT can follow and support its **Customers** toward their industrial footprints.

**JTEKT Suppliers** must supply evidence of their international footprint strategy to be part of the **Game**.

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Global Footprint

- Financial Stability
- Expansion
- Capacity

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Global Footprint

- Global Best Price
- Annual Price Reductions
- Long-term Agreements
Global Footprint

- Zero Defects
- Global Support System

Partners in Performance
Global Footprint

- Technical Support
- Prototype
- VA/VE

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Global Footprint

- Incoterms / Export
- Packaging
## Conclusion

### Opportunities
- Technology that is growing our business.
- Collaborate with your ideas.
- Growth not only in N.A but globally

### Global Footprint
- Customers transition to global platforms = One global competitive price.
- Ability to service multiple regions.

### Partners in Performance
- Improvement needed to win - Assess situation and Step up.
- Continual Improvement: VA VE, Eradicate Defects and Process variation, Review quality systems and control points.
- Engage the Support from JTEKT: cost analysis, workshops, communication and joint annual plans for improvements (Mid term plans and Kitaichi)
2014 Supplier Awards

Partners in Performance – JTEKT North America 2014 Supplier Conference
WINNER
2014 New Supplier of the Year
MINO INDUSTRIES

Partners in Performance – JTEKT North America 2014 Supplier Conference
WINNER
2014 Quality Excellence Award
CAROLINA FORGE

Partners in Performance – JTEKT North America 2014 Supplier Conference
Supplier Awards

Congratulations!

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