VOLVO

MMOG/LE version 3

Meeting October 26th



Henry Rostén Volume, Program & Order Manager

VOLVO Innovation and Growth



MMOG/LE version 3 (Logistikbedömning) den 26 oktober kl 13.00 – 14.00

Vad är nytt i version 3?

Vilken roll har MMOG/LE inom industrin? Hur används verktyget inom AB Volvo? Henry Rostén, Volvo Powertrain

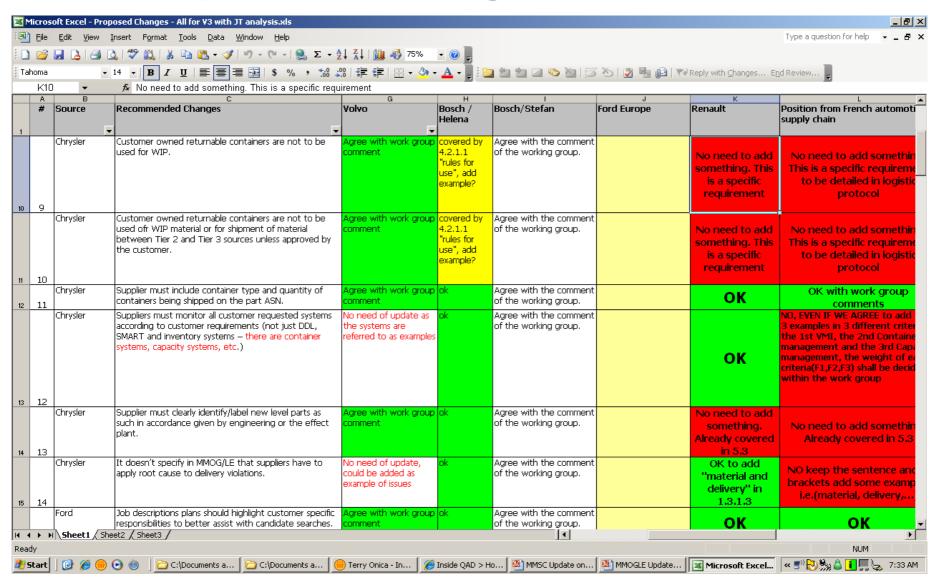


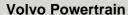
Global MMOG/LE Version 3 Team

Back: Gates, Odette Spain, SMMT (UK), AIAG, QAD, Bosch, Volvo Truck, VDA (Germany), Galia (France), and Chrysler. Front: Ford and Odette Spain



130+ Proposals for Change





Volvo Powertrain Operations

What Remains Unchanged in Version 3

- 6 Chapters
- 206 Total Criteria
- Criteria Weighting
 - * 96 F1 criteria
 - * 75 F2 criteria
 - * 35 F3 criteria

Summary of Changes/Enhancements

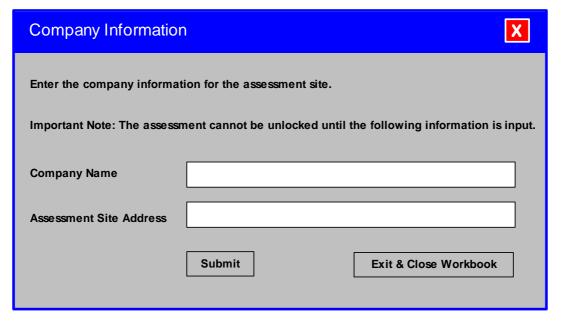
- Document Security
- Introduction and Instructions
- Assessment
- Scoring Summary
- Gap Analysis
- Radar Charts
- Progression Chart
- FAQ
- Further Information

Document Security

- Need to resolve uncontrolled distribution of Global MMOG/LE
- Typical issues include:
 - users acquiring "old" versions
 - OEM's placing MMOG/LE on their websites
 - control of updates

Document Security

- New process introduced:
 - After download, Company name and site address must be input before MMOG/LE will operate



- The information is transferred automatically into the Scoring Summary
- ❖ The information cannot be deleted or overwritten

Introduction and Instructions

- MMOG/LE more explanation regarding:
 - Compatibility with ISO/TS 16949
 - Alignment with Lean Principles
 - Audit process requirements
 - Use of a "light" version of MMOG/LE with sub suppliers
- Instructions for new features
 - Charts
 - Navigation

Assessment

- Reviewed all 206 criteria
 - More definition and greater clarity of meaning for each of the criteria to avoid misunderstanding and misinterpretation
- Reviewed all "Sub Chapter" and "Why" statements
 - Strengthened further by providing additional explanation of the benefits to the organization

(e.g. cost and waste reduction)

Addition of Comment section for each criteria

Undertaking MMOG/LE V3

- Read through the entire Introduction and Instructions section
- Be sure to read carefully through ALL Assessment Statements,
 Whys and Criteria



New Compliance Symbol

Version 2:

Version 3:



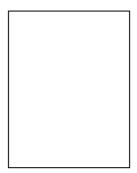
Response Options for Assessment



Compliant

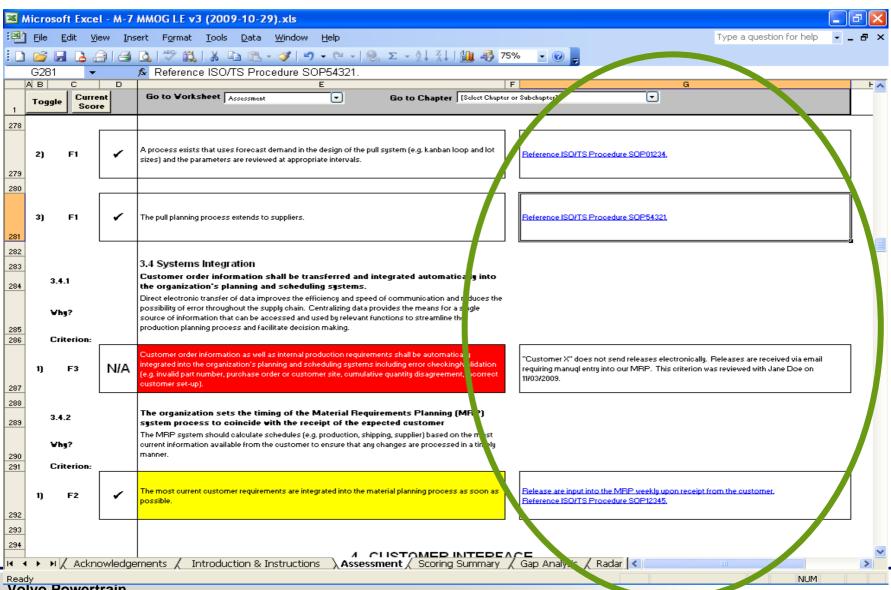


Non Applicable



Non Compliant

Comments Box Added for all Criteria

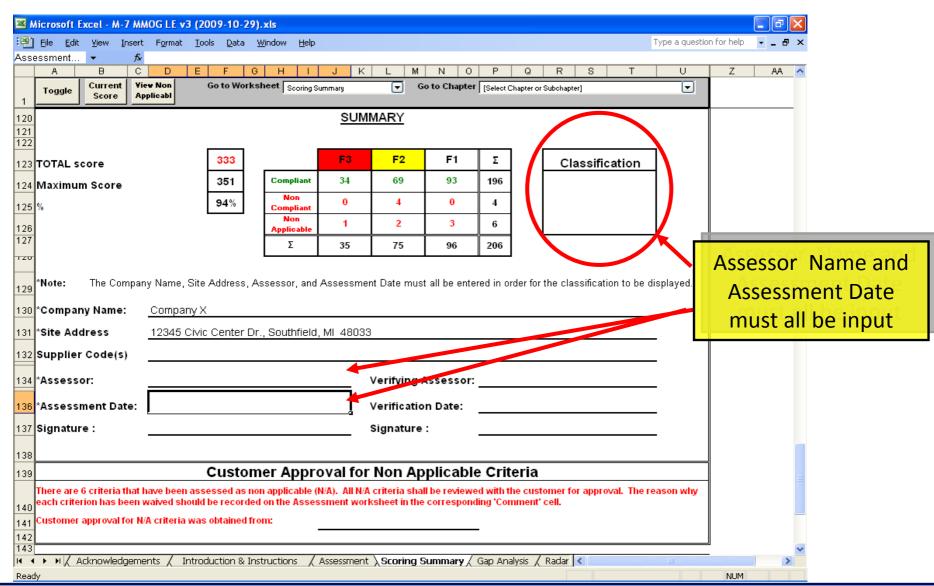


Volvo Powertrain

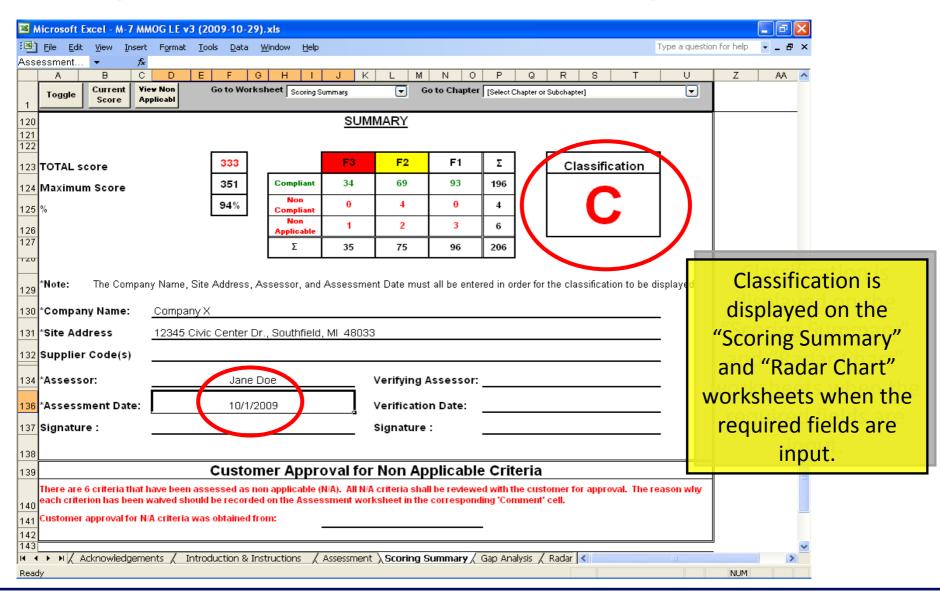
Scoring Summary

- Classification/grade/level will not be shown until Company Name,
 Site Address, Assessor Name and Assessment date are input
- Better visualization and management of N/A criteria
- Color-coding to highlight problem areas

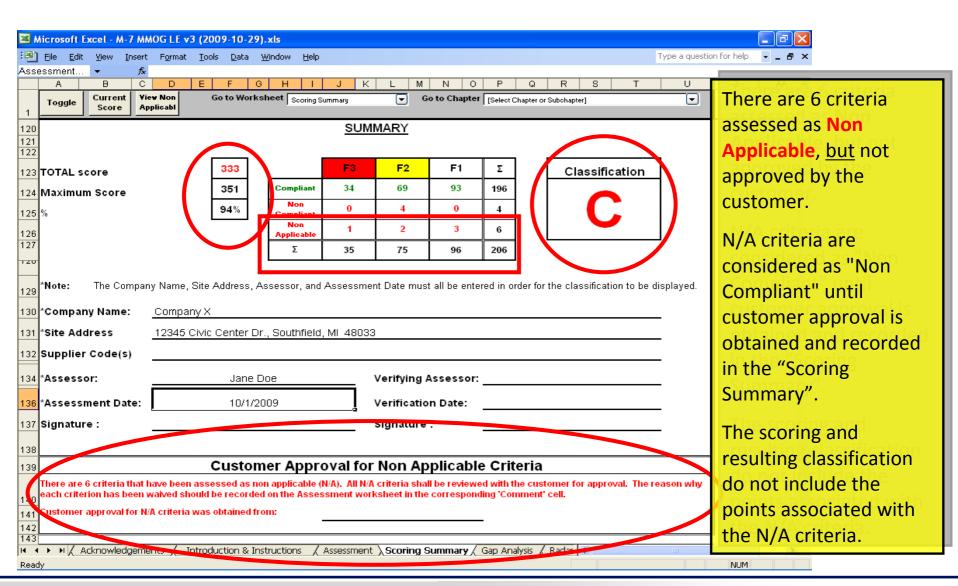
Scoring Summary: Score NOT Displaying



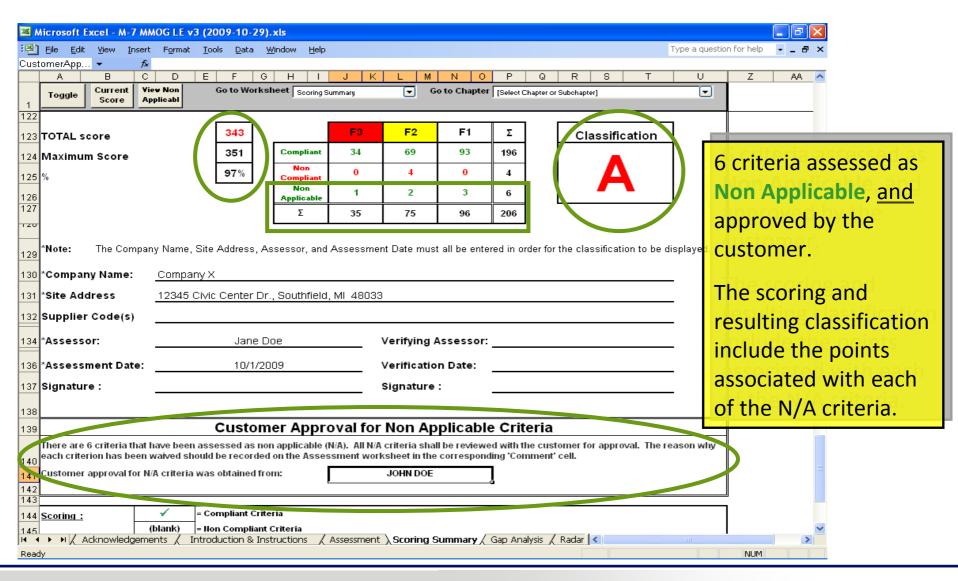
Scoring Summary: Score displaying

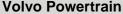


Scoring Summary N/A NOT Approved by the Customer

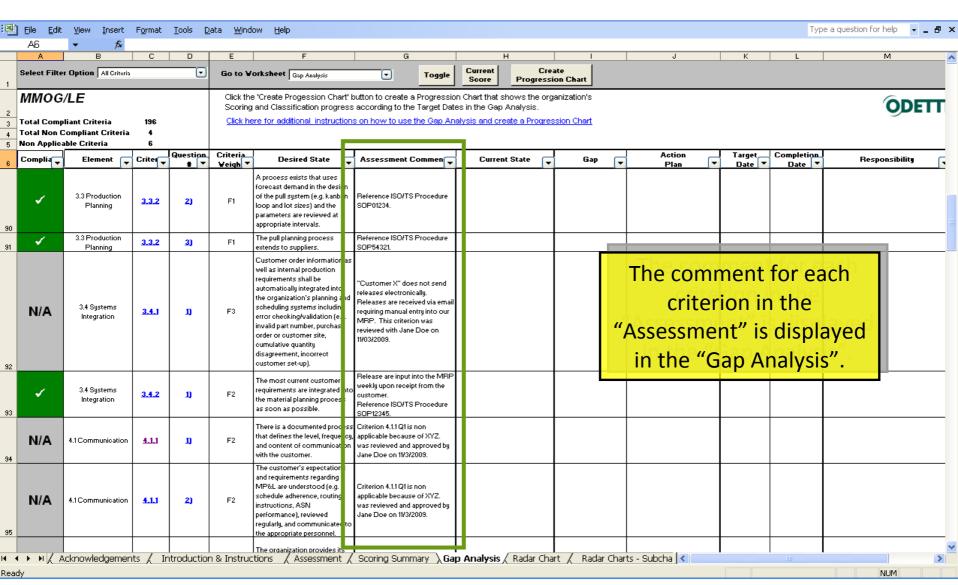


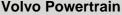
Scoring Summary N/A with Customer Approval



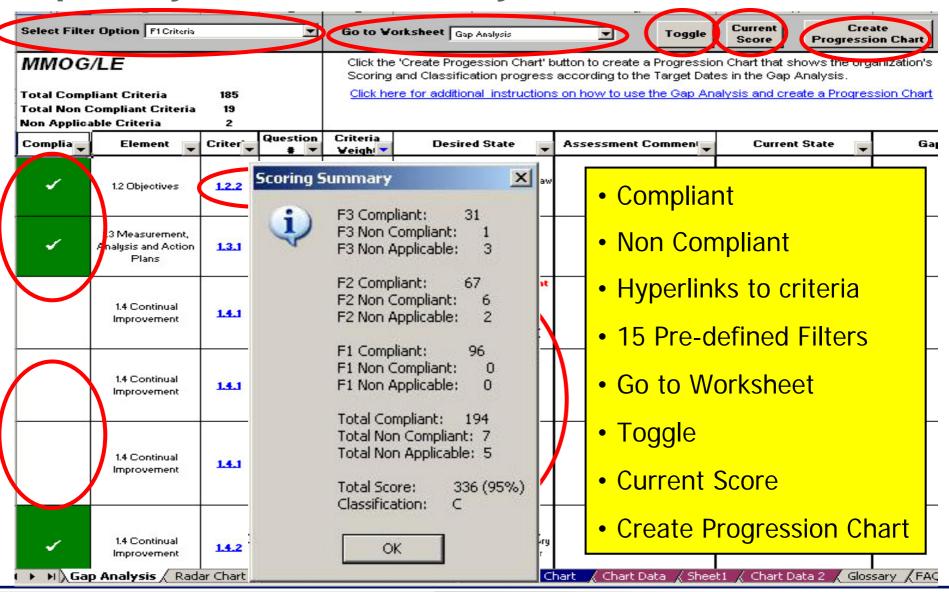


Gap Analysis with Comments





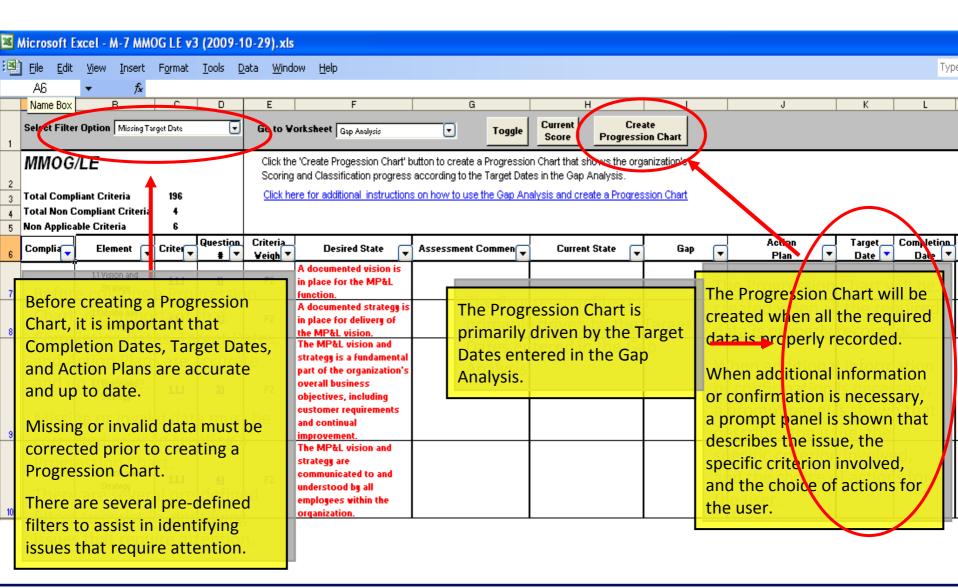
Gap Analysis: User-friendly functions



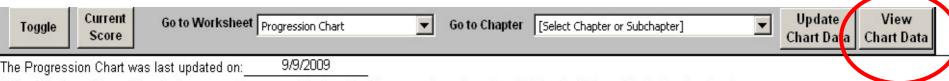


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Create Progression Chart

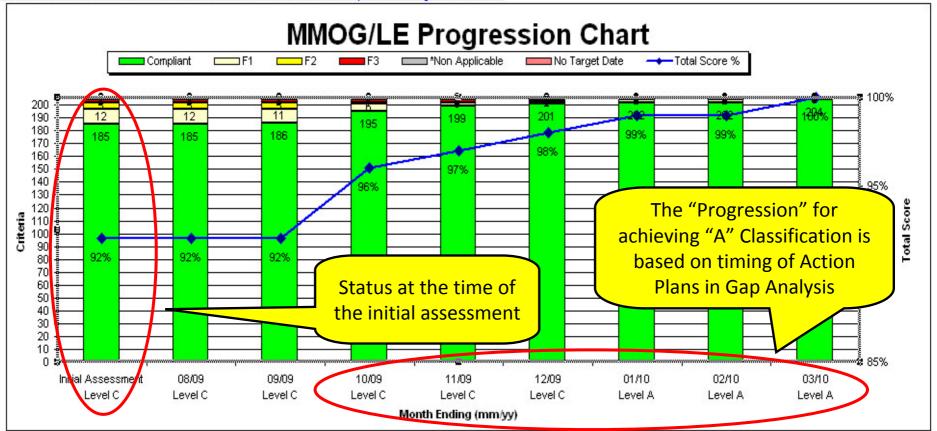


Progression Chart



Note: The formatting of the chart may require some adjustment by the user where there is a high level of information being displayed.

Click here for additional instructions on how to create and/or interpret the Progression Chart



^{*}There are 2 N/A criteria that have been approved by the customer.



View Chart Data

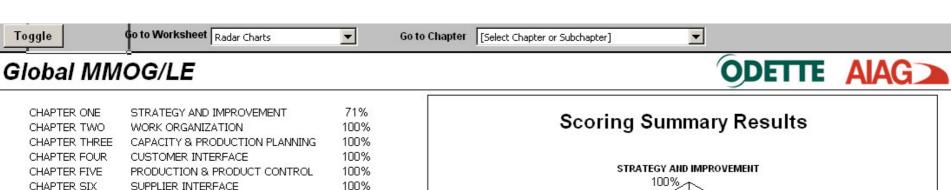
	Initial		2 (22)				20 020	102000000	
Month Ending	Assessment	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Compliant	185	185	186	195	199	201	202	202	206
NonCompliant (F1)	12	12	11	6	3	2	2	2	0
NonCompliant (F2)	5	5	5	1	0	0	0	0	0
NonCompliant (F3)	2	2	2	2	2	1	0	0	0
*Non Applicable	2	2	2	2	2	2	2	2	2
No Target Date	0	0	0	0	0	0	0	0	0
Total Score %	92%	92%	92%	96%	97%	98%	99%	99%	100%
Classification	С	С	C	С	С	С	A	A	Α

No Target Date	Initial Assessment	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
No Target Date (F1)	0	0	0	0	0	0	0	0	0
No Target Date (F2)	0	0	0	0	0	0	0	0	0
No Target Date (F3)	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

^{*}There are 2 N/A criteria that have been approved by the customer.

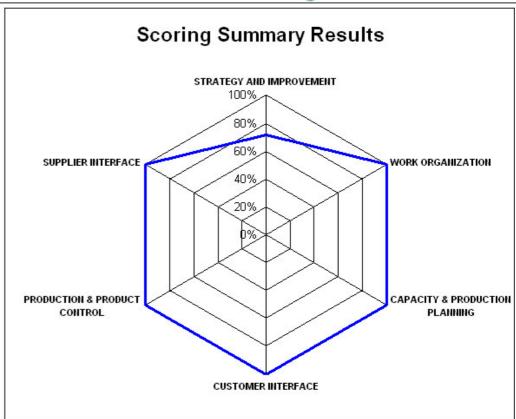


Radar Chart Views



94%

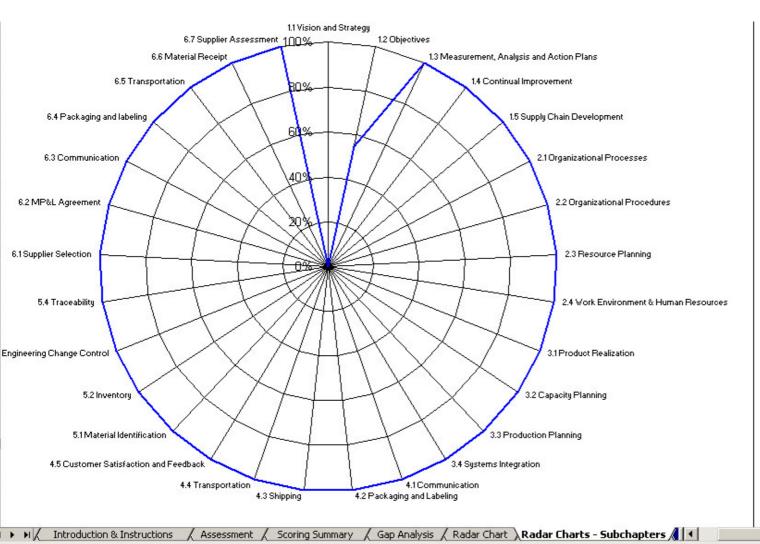
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▶ ▶ / Introduction & Instructions / Assessment / Scoring Summary / Gap Analysis \ Radar Chart / Radar Charts - Subchapters / | ◀ | ◀

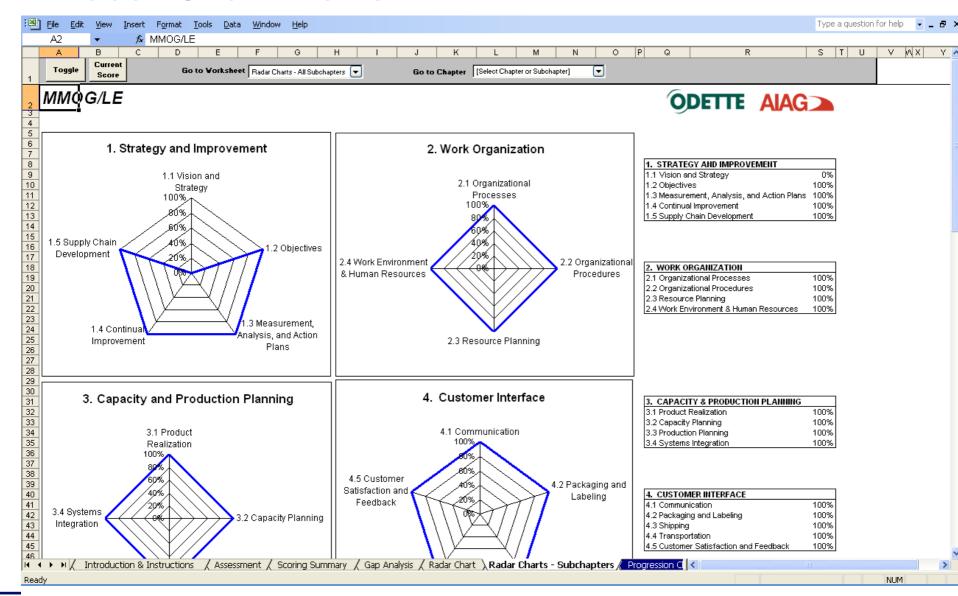


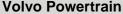
Radar Chart Views



ALL SUB-CHAPTERS	
1.1 Vision and Strategy	0;
1.2 Objectives	555
1.3 Measurement, Analysis and Action Pla-	1005
1.4 Continual Improvement	1003
1.5 Supply Chain Development	1005
2.1 Organizational Processes	1005
2.2 Organizational Procedures	1003
2.3 Resource Planning	1005
2.4 Work Environment & Human Resource	100:
3.1 Product Realization	1005
3.2 Capacity Planning	1005
3.3 Production Planning	100:
3.4 Systems Integration	1005
4.1 Communication	1005
4.2 Packaging and Labeling	100:
4.3 Shipping	1005
4.4 Transportation	1005
4.5 Customer Satisfaction and Feedback	100:
5.1 Material Identification	1005
5.2 Inventory	1005
5.3 Engineering Change Control	1005
5.4 Traceability	1005
6.1 Supplier Selection	1005
6.2 MP&L Agreement	1003
6.3 Communication	100:
6.4 Packaging and labeling	100:
6.5 Transportation	1005
6.6 Material Receipt	1005
6.7 Supplier Assessment	1005

Radar Chart Views





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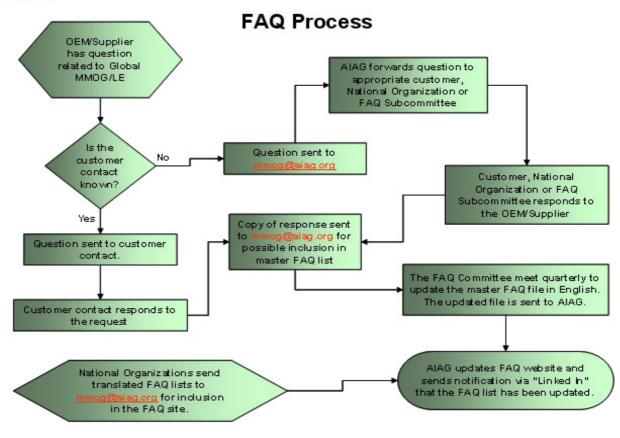


FAQ Section

MMOG/LE



The FAQ process flowchart is shown below.



Further Information Section



MMOG LE



To obtain related publications as identied in the Global Best Practice Suite in the Introduction Section:

AIAG http://www.aiag.org Odette http://www.odette.org

Other MMOG/LE associated websites

MMOG/LE "Linked In" site http://www.linkedin.com/groups?gid=1783522&trk=hb_side_g

AIAG Corporate Responsibility site http://cr.aiaq.org/index.cfm

Where to go to obtain further information on translated versions of MMOG/LE or to inquire about training:

Odette Benelux Belgium

Canada AIAG AIAG China

Odette Czech Czech Republic **GALIA** France VDA Germany Japan AIAG Korea AIAG

Luxembourg Odette Benelux

Mexico AIAG

Netherlands Odette Benelux

Portuguese Odette

Odette Romania Romania

AIAG Russia Slovenia Odette Spain Odette Spain Sweden Odette Sweden AIAG

United States

www.odettebenelux.org

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▶ ► ► A Gap Analysis A Radar Chart

Radar Charts - Subchapters



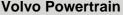






Progression Chart / Chart Data / Glossary / FAQs / Further Information / Ma







New MMOG/LE Translations

• Available in 12 languages including:

English French German

Spanish Chinese Portuguese

Romanian Turkish Czech

Slovene Korean Italian



MMOG/LE version 3 (Logistikbedömning) den 26 oktober kl 13.00 – 14.00

Vad är nytt i version 3?
Vilken roll har MMOG/LE inom industrin?
Hur används verktyget inom AB Volvo?
Henry Rostén, Volvo Powertrain



OEM Usage Chart

OEM	EMEA	North America	South America	Asia/ Pacific	Frequency of Submission	Comments
Ford	Yes	Yes	Yes	Yes	Annually. This is a requirement for Q1.	Currently, all regions using Global MMOG/LE for Q1 require Level A;
PSA PEUGEOT CITROËN	Western Central and Eastern Europe only		Yes		New vehicle project	Strong involvement of the plant management is required in order to make sure that progress is in place.
RENAULT	Yes	Yes	Yes	Yes	Required all suppliers	
Volvo Car	Yes	Yes	Yes	Yes	Annually. This is a requirement for Q1	
Volvo Group	Yes	Yes	Yes	Yes	When selecting new suppliers. Annually for existing suppliers.	MMOG/LE is part of the supplier selection process. Volvo Group requests their suppliers to use the MMOG/LE with their suppliers.



OEM Usage Chart

ОЕМ	EMEA	North America	South America	Asia/ Pacific	Frequency of Submission	Comments
CHRYSLER	Yes	Yes	Yes	Yes	Annually; all suppliers. For 2010, by 12/31/10 (unless otherwise directed). For 2011, by March 31 (unless otherwise directed)	Chrysler's requirement for 2010 is: Suppliers must complete the MMOG/LE v3 self-assessment; Have the completed self-assessment available upon request, and Enter specific MMOG/LE result information into Chrysler's DRIVe system (Note: DRIVe enhancement is under construction; interim process will be manual collection via Chrysler established template). Completion will be part of the Suppliers Delivery Performance Rating. Level requirement will be established for 2011 CY.



OEM	Supplier Audit Policy
Ford	Potential suppliers, new suppliers, and problem suppliers. All suppliers will eventually get an audit. Major and problem suppliers will be prioritized.
PSA PEUGEOT CITROËN	Suppliers are consulted on the Global MMOG/LE in the Project Phase. Annual audits are not required annually, only during the project phase. In the Trial phase, evaluations are carried out if there are problems with the supplier.
RENAULT	New and problem suppliers.
Volvo Car	An attempt is made to visit all new suppliers and big volume suppliers. For potential suppliers self-assessment is the first step.
Volvo Group	Potential suppliers, new suppliers, low performing suppliers and existing suppliers.

OEM	Supplier Audit Policy
CHRYSLER	 Chrysler personnel will review the MMOG/LE v3 self-assessment score detail and, where available, compare that information to a Supplier's Delivery Performance (as measured via the DRIVe system), identifying potential process gaps. Additional audits will be conducted of suppliers that have a significant variance in the MMOG/LE self-assessment score detail and their actual Chrysler Delivery Performance Rating. Additional Chrysler specific system / process assessments via a Supplier Delivery Capability Assessment (SDCA) will be conducted as necessary for new suppliers, new supplier locations, and problem suppliers.





New Interests in Using MMOG/LE

- Iveco
- German Vehicle Manufacturers and Suppliers
- **GM**
- Avtovaz
- Ikea

Renault Revoz, Slovenia Experience

MMOG/LE mandatory in project phase New Twingo, Service Rate comparison, July 2007:

New suppliers (Emerging market) using MMOG/LE

Service Rate = 91 %

'Old' suppliers (Western/mature Market):

Service Rate = 80 %





Suppliers Logistics KPIs (2004-2008)

Ford Otosan, Turkey

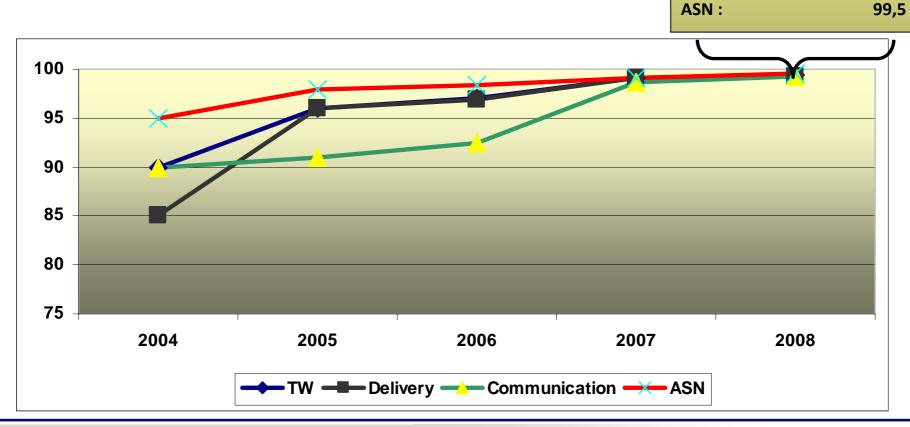
2008 Performances;

Time Window: 99,4 99,2 **Delivery:**

99,3

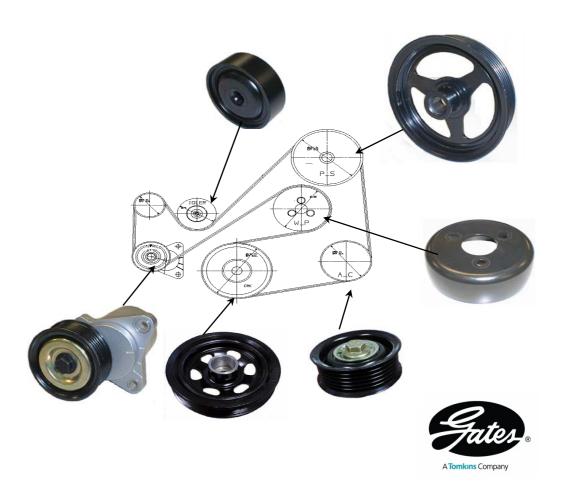
Communication:

ASN:



GATES – London Operations

- Products manufactured include pulleys, dampers and idlers.
- Approx \$55 million in sales (medium size)
- Supplies to both OEMs and major Tier 1's
 - Ford, General Motors, Nissan, **Automotive Component Holdings** (Visteon)



GATES

CUSTOMER DELIVERY PERFORMANCE

- On time shipping performance to customers in 2009 was 99%
- Delivery ratings to customers providing feedback is 100

SUPPLIER PERFORMANCE

- On time delivery from suppliers is 100% on date required
- 97% of material requirements are communicated electronically to suppliers
- 95% of incoming material shipments are transmitted via ASNs



GATES

PHYSICAL INVENTORY

- As accuracy improved, reduced from 12 to 1 a year
 - Estimated cost for a physical inventory is \$15-20K (overtime wages, equipment rental, inventory tags, etc.)

INVENTORY VALUE

- Reduction of approx. 50% since 2001
 - Since 2001 sales have increased by 20%

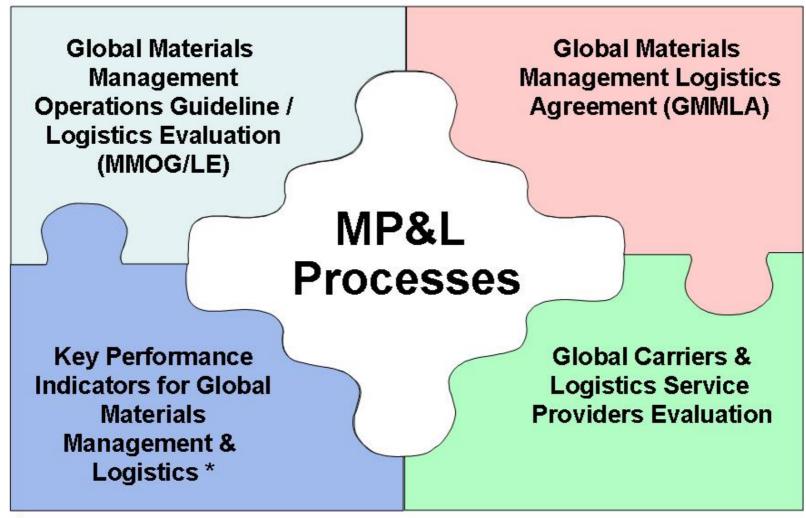
EXPEDITED SHIPMENTS

 Premium freight on inbound/outbound material has gone from \$180K in 2002 less than \$5k last year

GATES

- Suppliers are encouraged to use MMOG/LE as basis for developing a robust materials management process.
- Supplier partnership manual addresses 'high impact' questions.
- Supplier Quality System Assessments measure effectiveness of materials management processes.

Global Best Practice Suite



^{*}KPI for Carriers/LSPs is currently available only as an Odette document

GLOBAL MATERIALS MANAGEMENT LOGISTICS AGREEMENT (GMMLA)

- Published in 2008
 - Odette Logistics agreement 2003
- Provide recommendations and advice regarding format and content of a logistics agreement
- Relationships between the parties are documented and clearly understood

GLOBAL CARRIERS & LOGISTICS SERVICE PROVIDERS EVALUATION

- Published in 2008
- Transportation plays an increasingly important role
- Based on the MMOG/LE
 - Focus on best practices of Carriers and Logistics Service Providers (LSPs)

KEY PERFORMANCE INDICATORS for GLOBAL MATERIALS MANAGEMENT & LOGISTICS

- Published in 2006
 - Based on Odette Logistics Key Performance Indicators and AIAG
 Supplier Delivery Performance Metrics Guidelines
- Define standard key performance indicators
 - Common to the industry and understood by Suppliers and customers

VOLVO