



atiel

DRIVING STANDARDS  
IN LUBRICANT TECHNOLOGY

The logo features the word "atiel" in a lowercase, sans-serif font. A yellow swoosh starts from the top right, loops around the letters, and ends at the bottom left. A small yellow sphere is positioned above the letter 'i'. Below the brand name, the tagline "DRIVING STANDARDS IN LUBRICANT TECHNOLOGY" is written in a smaller, uppercase, sans-serif font. The background is a dark gradient with abstract, glowing orange and yellow shapes and lines on the left side.



# EELQMS and the ATIEL Code of Practice

Lubricants Russia 2008

Moscow

November 2008

Dr. Mike Wharton - ATIEL Secretary General

# ATIEL

- Technical Association of the European Lubricants Industry
- Principal Interactions
  - European Vehicle Manufacturers.....ACEA
  - European Additive Suppliers.....ATC
  - European OEMs
- Principal activities
  - European Lubricant Specifications.....ACEA Sequences
  - Base oils....Standards and Interchange
  - HSE issues....REACH ...Used Oil etc.



# Seventeen members



# Extract from ACEA Sequences

*“All engine performance testing used to support a claim of compliance with these ACEA sequences must be generated according to the European Engine Lubricants Quality Management System (EELQMS)”*

**What does EELQMS mean?**

# EELQMS

European

Engine

Lubricants

Quality

Management

System

# Before EELQMS

- Oil development unregulated
- Testing standards were variable - test precision ill-defined
- Documentation unstructured
- Judgements about use of alternative base stocks or re-blending at different viscosity grade levels were not data based
- Less confidence that oils really met the target specification requirements
- Not obvious that any two oils claiming to meet one standard were equivalent

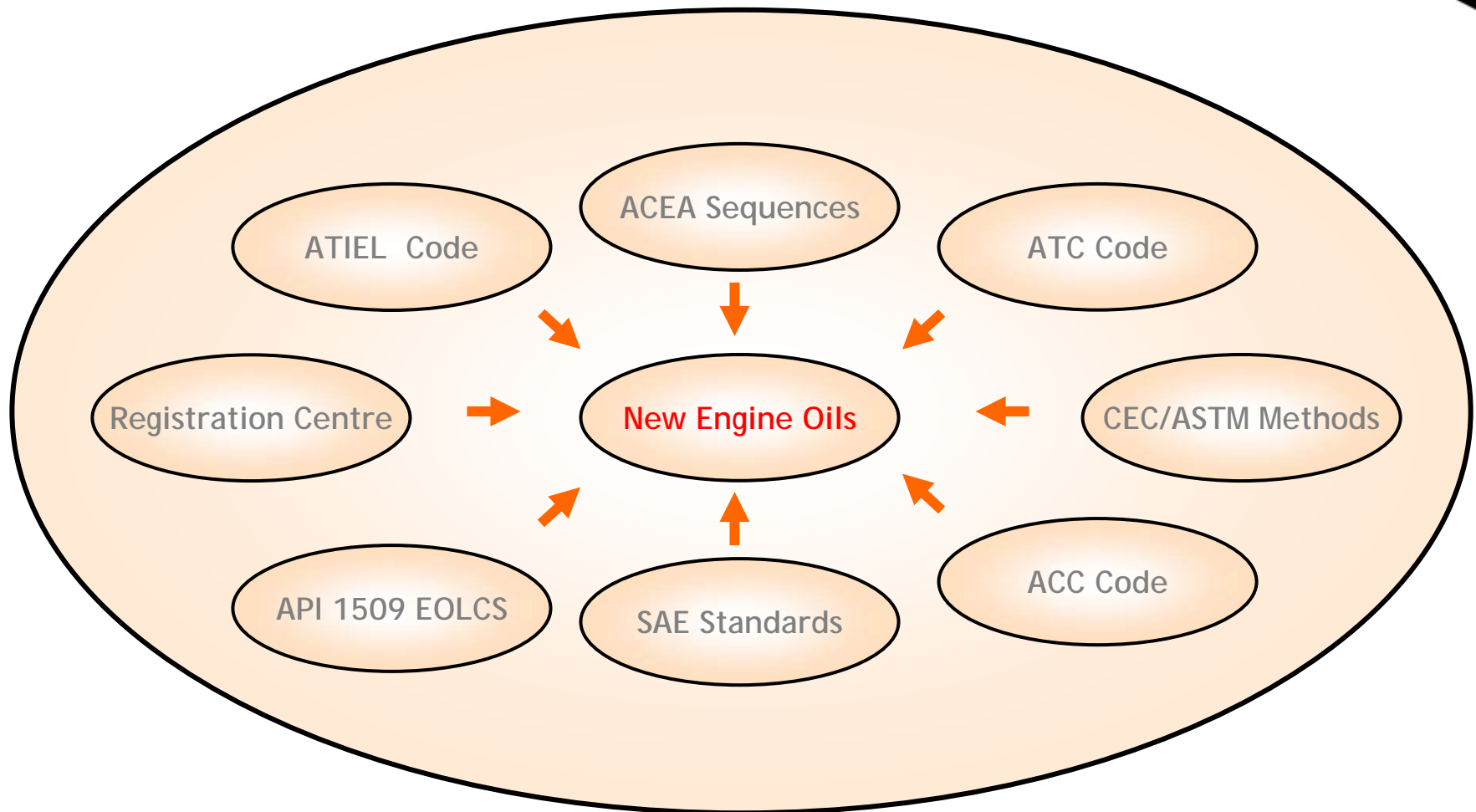
...and then from 1996...

## and then...

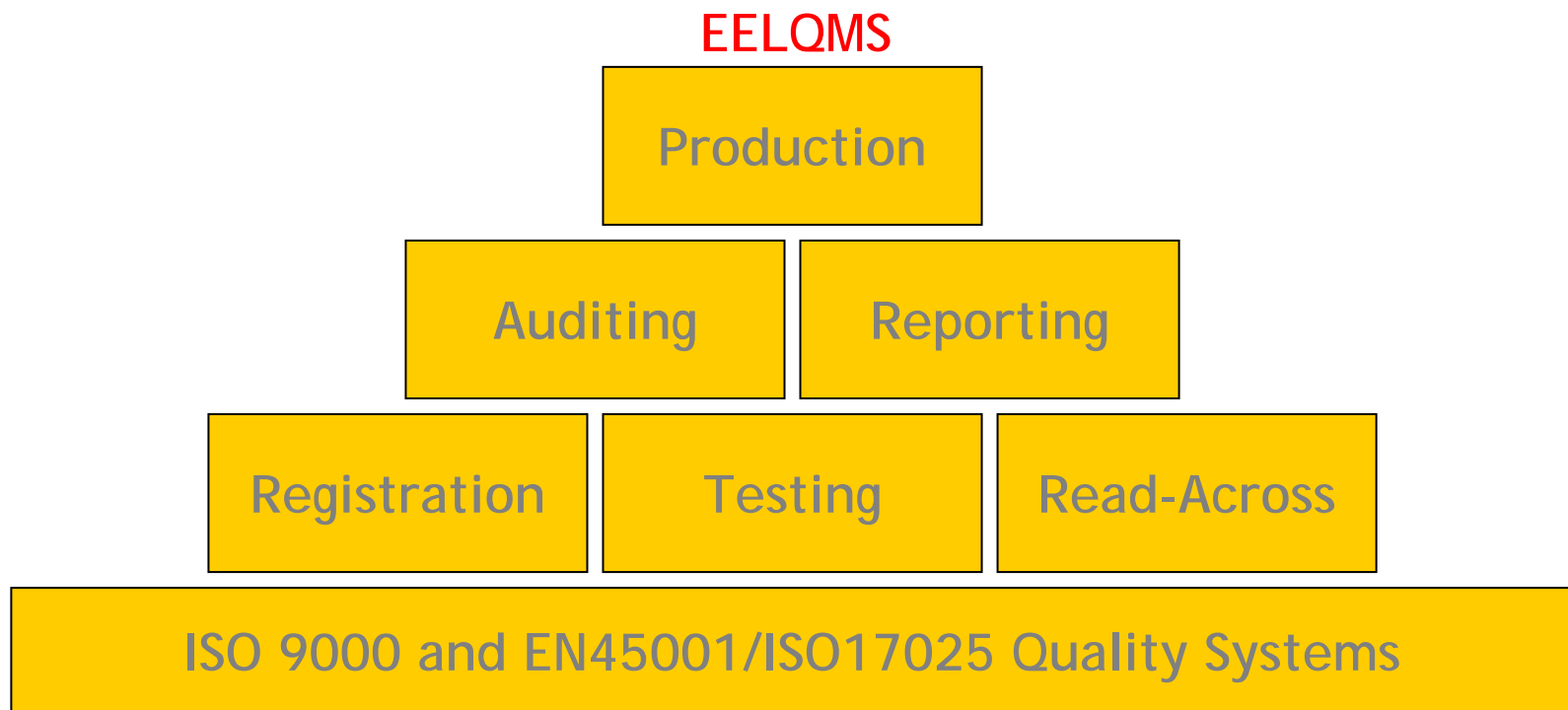
- In 1994 at the request of the US OEMs
  - API introduced EOLCS (Engine Oil Lubricant Classification System) to address this lack of rigour
  - At that time SG moved to SH
  - No severity increase but quality conformance system upgraded
- In 1996 **ACEA, ATIEL & ATC** developed and introduced EELQMS
  - Same principles as API - some detailed differences relevant to Europe
- Both schemes use a set of rigorous quality principles which were fully endorsed by all stakeholders
- Both schemes promote and maintain a large increase in product quality



# EELQMS Building Blocks



# Key Themes

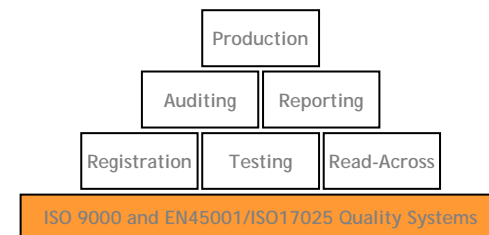


Controlling all aspects of testing and reporting for ACEA claims

# Quality Systems

- ISO 9000 International Quality System
  - EELQMS made an integral part of the Oil Marketers' ISO9000 procedures
  - Covers general documentation and record keeping
- EN45001/ISO17025
  - Accreditation of laboratory facilities
  - Demonstrates that the laboratories actually follow procedural detail

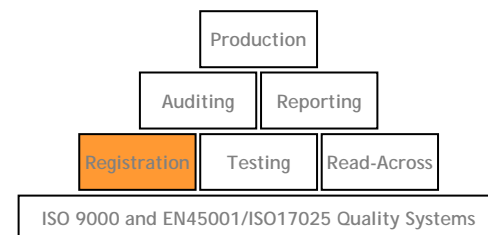
## Internationally recognised standards



# Test Registration

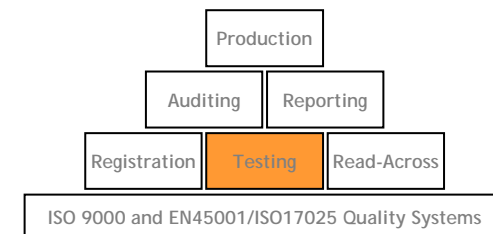
- European Registration Centre
- Administrative centre in Pittsburgh Pennsylvania!
- Test registration
- Test stand allocation
- Collation of data
- Reference data trends
- Password controlled access

**All test starts and results are recorded to exacting standards**



# Testing

- Internationally recognised methods
- e.g. CEC and ASTM methods
- Precision is assessed and compared against target values via established test monitoring systems
- Ensures that the probability of truly failing oils passing is minimised



# Read-Across

- There are three types of read-across:

Viscosity grade

Base oil

Viscosity modifier

- These exist because:

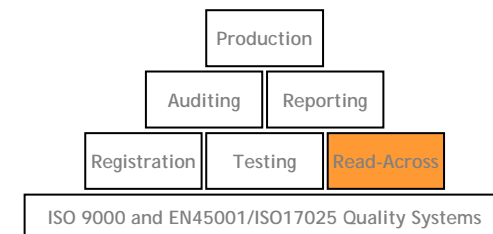
An individual company's lubricants may be blended in several blending plants

Logistical and economic drivers may lead these to using different base oils

Companies may wish to market an oil at a range of viscosity grades perhaps using several viscosity modifiers

- Complete testing of all combinations cannot be justified technically
- EELQMS read-across rules follow the same principles as API

**Product quality is assured for all grade and blending combinations**



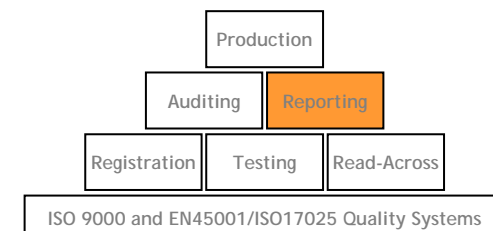
# Test Monitoring

- Engine tests - through registration system
- Bench tests - through on-line CEC scheme
- Allows:
  - outliers
  - time trends
  - changes in severityto be identified and acted upon

**ACEA can see all reference oil data using their own password**

# Reporting

- The format in which data is reported throughout a testing programme is tightly defined with Appendix D of the ATIEL CoP
- Terms are tightly and consistently defined
- Programme sponsors are obliged to disclose all required information
- The major output from a testing programme is a Candidate Data Package
- The CDP is **THE** document used to demonstrate that a product's performance claims have been met





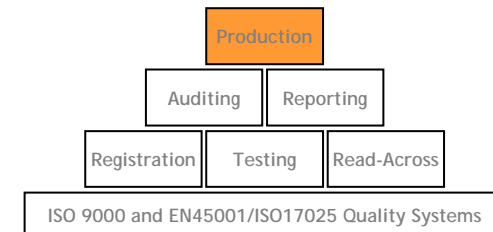
# Candidate Data Package



**The evidence**  
**A Typical CDP**

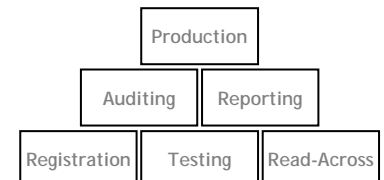
# Blending and Production

- All blending plants must be ISO9001 accredited
  - Actual blending
  - Filling
  - Packaging
  - Labelling
- Accreditation achieved within 18 months of commissioning
- Marketer is responsible for the quality of products provided by third parties



# Conformance

- **ATIEL Letter of Conformance**  
Signed by ~70 European oil marketers
- **ATC Letter of Intent**  
Dependent and independent laboratories  
Oil and additive companies sponsoring tests
- **Base oil Manufacturers Letter of Conformance**  
Signed by ~10 base oil producers
- **Conformance**  
Internal and external audits demonstrate that 'the rules' have been followed



# EELQMS



Your assurance that ALL of these products  
do what they say on the can