



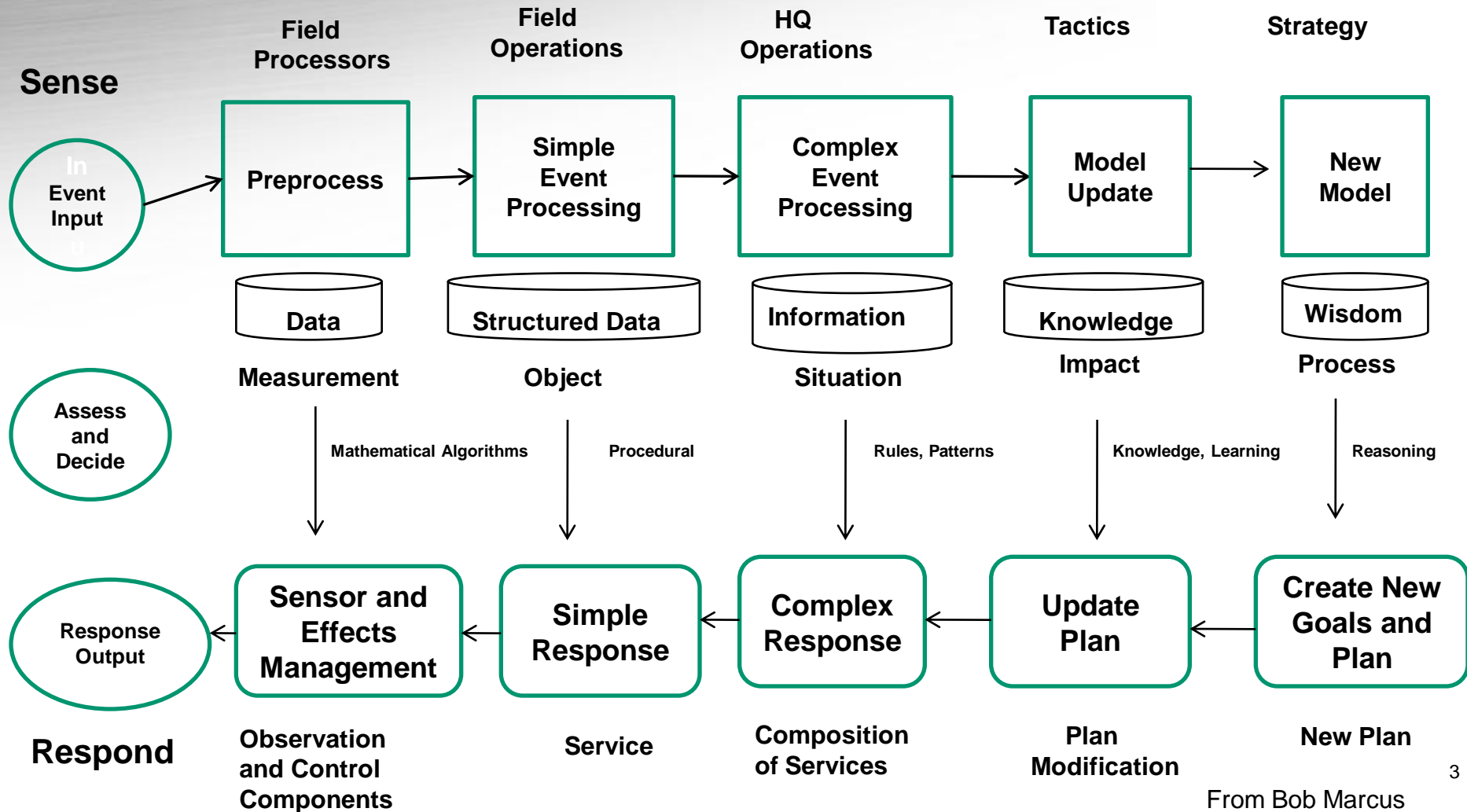
Network Centric Operations  
Industry Consortium

# **Event Processing in Sense and Respond Applications**

# NCOIC Session Agenda

- 11:30 - 12:30 (Agent Logic) "All Source, User-Defined, Event Detection, Correlation and Real-Time Alerting"
  - 12:30 - 1:30 (Progress Apama ) "Delivering Information Dominance - Complex Event Processing in Defense and Intelligence Application"
  - 1:30 - 2:30 (RTI-Coral8 ) "Complex Event Processing with Real-time, Net-centric Applications"
  - 2:30 - 3:30 (Streambase) "Event Processing in Network Monitoring, Intelligence, and Military Applications"
- 3:30 - 4:00 Wrap-up

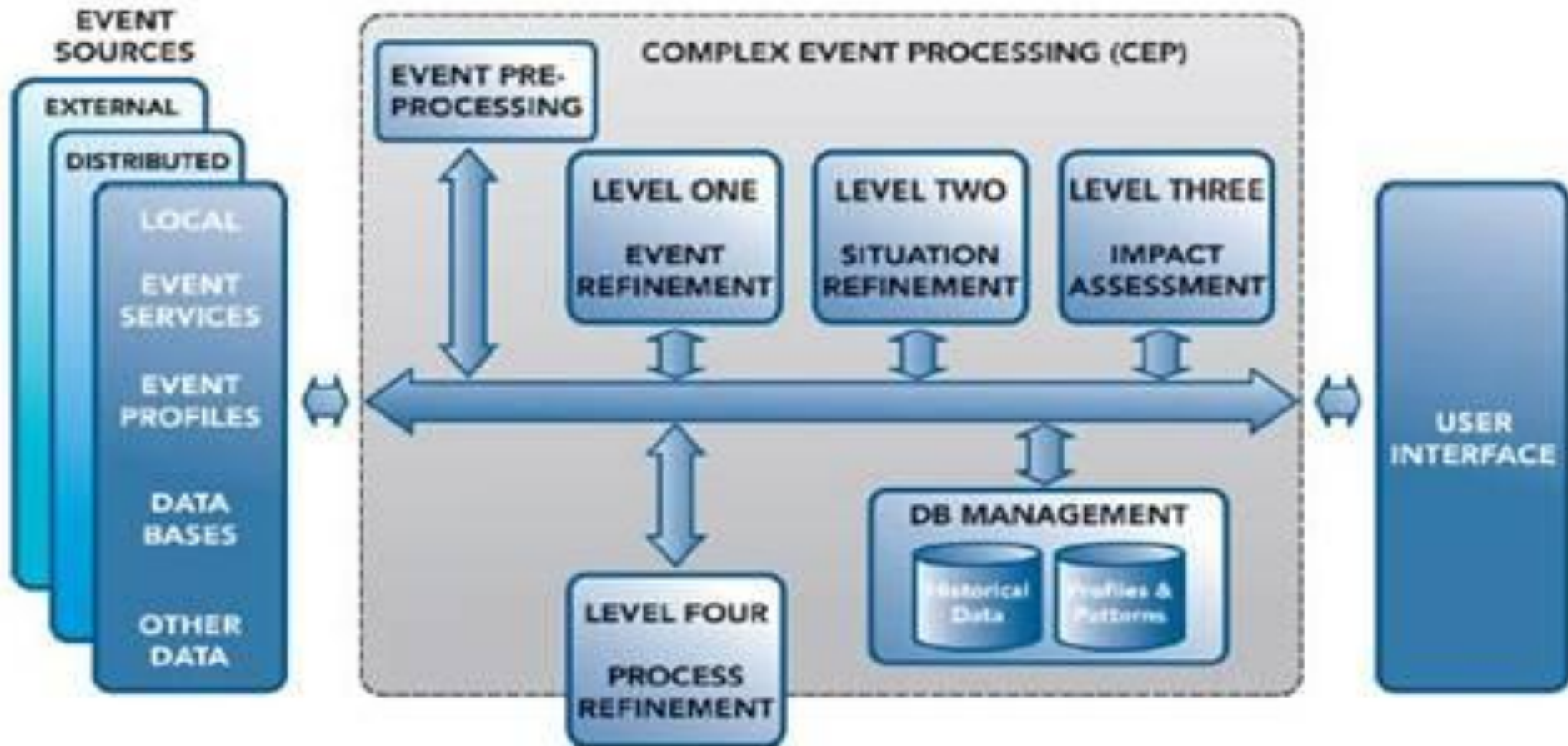
# Sense and Respond Reference Model



# Event Processing Background

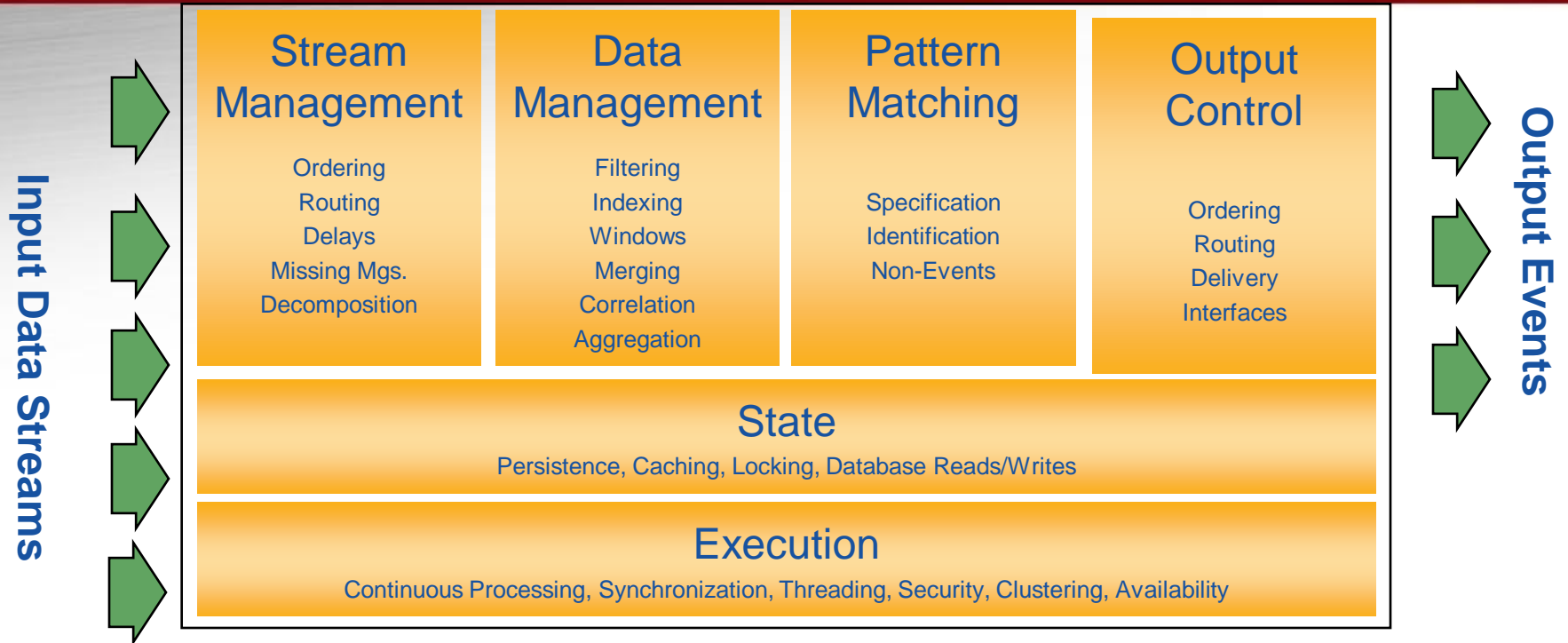
- Sense and Respond applications include Logistics and C4ISR
- Event processing provides sensing capabilities for applications
- Services can be used to provide response capabilities
- Complex responses are created by composing simple responses
- Complex events are created by combining simple events
- Complex event processing (CEP) is similar to data fusion in C4ISR
- CEP engines combine multiple capabilities and real-time performance
- The OMG is developing a Reference Model for events

# Complex Event Processing Reference Model



from Tim Bass

# Complex Event Processing Engine

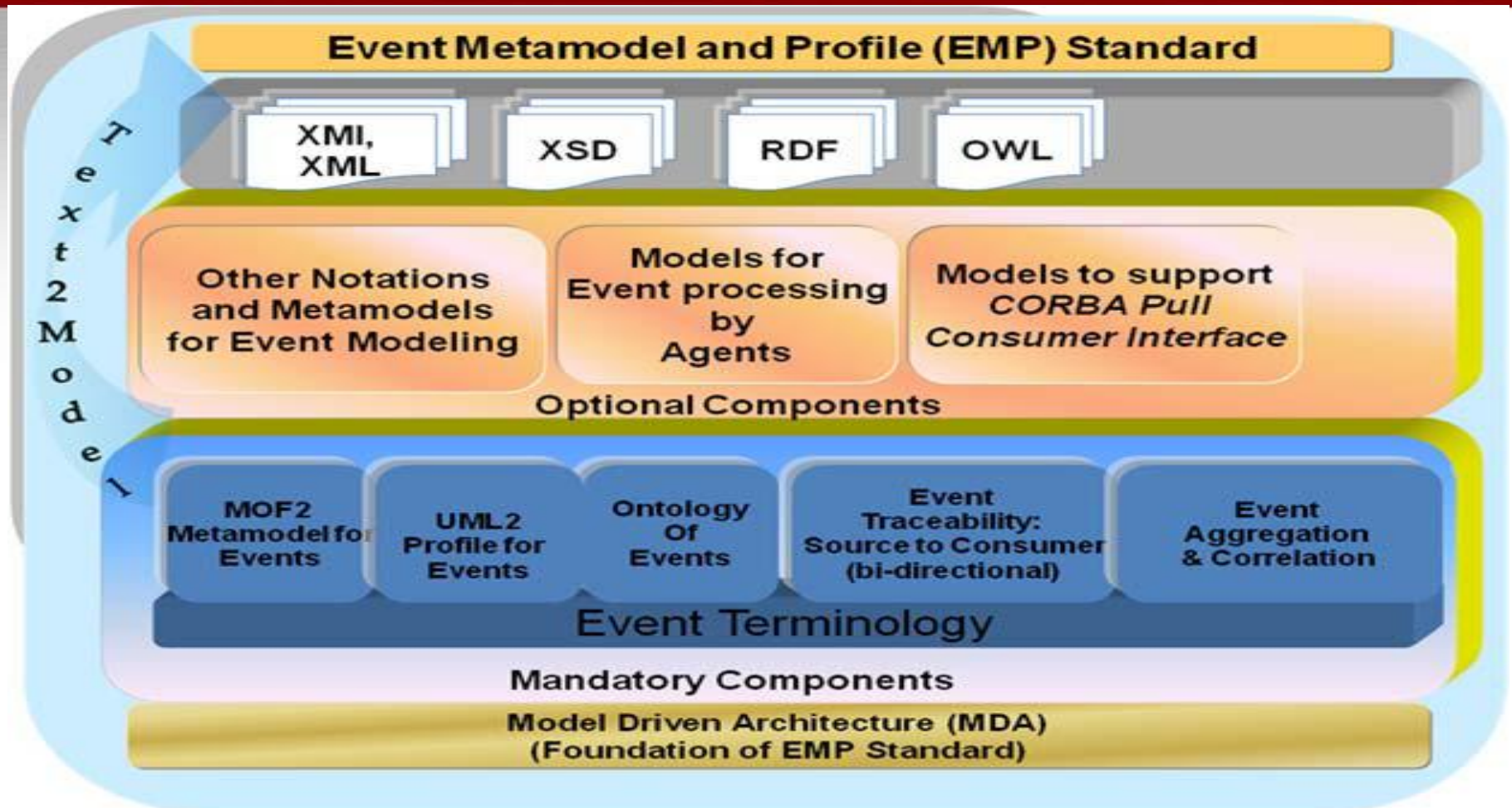


Complex Event Processing will:

- Save multiple man-years of development & maintenance
- Speed time-to-market
- Dramatically increase responsiveness to the business



# Reference Metamodel for Events from OMG



Reference metamodel for events from OMG

# Event Processing References

- Event Processing on the Global Information Grid  
[http://complexevents.com/wp-content/uploads/2007/01/Event\\_Processing\\_GIG\\_RHR.ppt](http://complexevents.com/wp-content/uploads/2007/01/Event_Processing_GIG_RHR.ppt)
- Sense and Respond Systems for Crisis Management: The Event Web  
[http://www.ima.umn.edu/talks/workshops/11-3-6.2003/chandy/AgentBasedModeling\\_20031103.pdf](http://www.ima.umn.edu/talks/workshops/11-3-6.2003/chandy/AgentBasedModeling_20031103.pdf)

## Event Processing Use Cases

<http://complexevents.com/?p=150>  
<http://complexevents.com/?p=149>

## Complex Event Processing Overview Parts 1 thru 8.

<http://thecepblog.com/2007/05/14/what-is-complex-event-processing-part-1/>

.....  
<http://thecepblog.com/2007/06/06/what-is-complex-event-processing-part-8/>



# Event Processing References2

- Event Processing Technical Society (glossary, reference models, interoperability standards)  
<http://complexevents.com/?p=125>
- Patterns for Complex Event Processing (CEP)  
<http://www.coral8.com/system/files/assets/pdf/Coral8DesignPatterns.pdf>
- Complex Event Processing Workshop and Symposium  
[http://complexevents.com/?page\\_id=87](http://complexevents.com/?page_id=87)  
[http://www.complexevents.com/?page\\_id=129](http://www.complexevents.com/?page_id=129)
- "The Power of Events" by Luckham is the classic book on Complex Event Processing  
<http://portal.acm.org/citation.cfm?id=515781>
- The OMG is requesting proposals for a standard Event Metamodel  
<http://www.omg.org/cgi-bin/doc?ad/2007-08-01>.

# Event Processing Downloads

- Aptsoft  
[http://www.aptsoft.com/cgi/request/acknowledgement.htm?form=trial\\_request.html](http://www.aptsoft.com/cgi/request/acknowledgement.htm?form=trial_request.html)
- Coral8  
<http://www.coral8.com/developers/download.html>
- Esper  
<http://esper.codehaus.org/esper/download/download.html>
- Nesper  
<http://esper.codehaus.org/nesper/download/download.html>
- Streambase  
<http://streambase.com/developers-home.htm>