

unleash the power of manufacturing services



cmFoundation

Critical

manufacturing

● SERVICE ORIENTED ARCHITECTURE

● ORCHESTRATION

● EXTENSIBLE MODEL

cmFOUNDATION'S NEXT GENERATION
MANUFACTURING ARCHITECTURE
enables total leverage of interoperable services,
packaging business processes through:

● **Service Interface**

Single point-of-entry for service requests

● **Orchestration services for multi-purpose use**

● **Multi-level cross-cutting functions**

● **Extensible manufacturing rich object set**

● **Next Generation User eXperience**

● **End-to-end seamless integration
of manufacturing solutions**

● **ERP integration**

● **Multi-site integration**

Communication

Operational
Management

Security

Presentation

Presentation Workflows

Service Interface

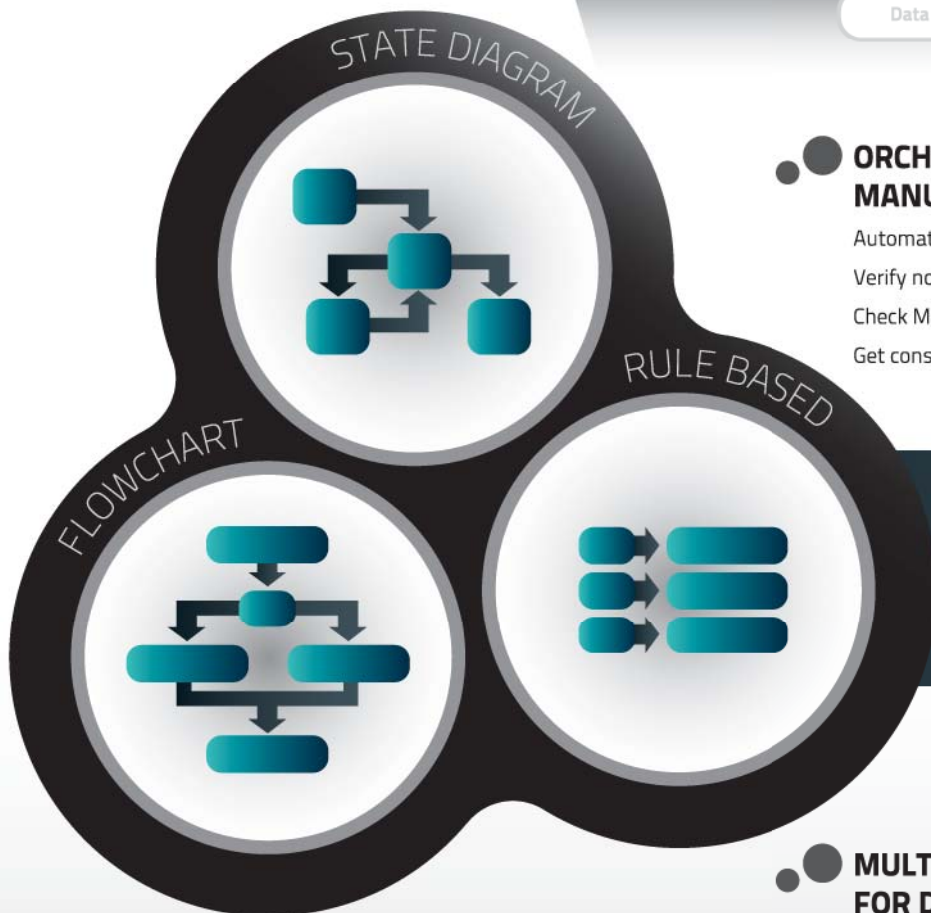
Business Workflows

Business Objects

Data Access Layer

POWERFUL ORCHESTRATION

From Web services to business flows



ORCHESTRATE ALL DIFFERENT MANUFACTURING INSTRUMENTS

Automatically collect data from Equipment
Verify non-conformance compliance
Check Maintenance plan
Get consumables lot ID

Generate ERP orders
Check lot integrity
Verify SPC rules
Get user input
[...]

Many business processes involve multiple steps that must be performed in the correct order and orchestrated in different workflow forms

MULTIPLE LEVEL BUSINESS WORKFLOWS FOR DIFFERENT SCENARIOS

Pre and post transaction evaluation and actions within main transaction context

Tightly coupled, short running, stateless workflows

Loosely coupled, long running, stateful workflows



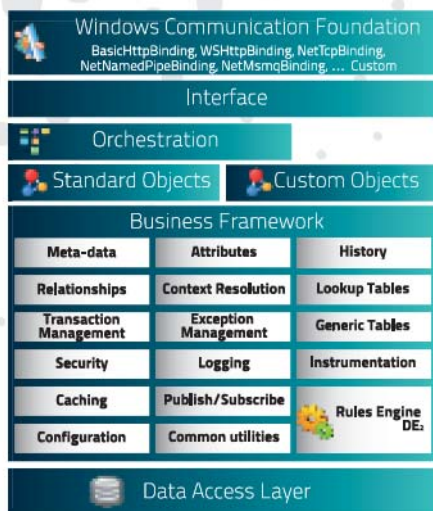
RICH, REUSABLE, EXTENSIBLE OBJECT MODEL

From a rich standard model
to the business unique model

**MODULARITY
CUSTOMIZATION
EXTENSIBILITY**



Rich, extensible business objects
Don't believe the "one size fits all"?
Neither do we...
Each business is unique...
... but there's no need to build your
software from the scratch



- Feature-rich, meta-data driven, high-volume transaction oriented platform
- Fully extensible rich base manufacturing objects

Critical

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www.criticalmanufacturing.com

HIGH-AVAILABILITY, LOAD BALANCING & SCALABILITY

World Class Reliability and High-performance Architecture

HIGH PERFORMANCE SCALABLE SOLUTION, BASED ON INTEROPERABLE WEB SERVICES

Scale your HW, according to the
manufacturing needs, at any time,
with no production impact



WORLD CLASS PERFORMANCE, RELIABILITY AND SCALABILITY

Usage of standards and
proven technologies for load
distribution and high
availability

DESIGN FOR PERFORMANCE

Scalable, loosely coupled
service-based solutions
Smart database partitioning

LOW TOTAL COST OF OWNERSHIP

Reduced 3rd party licenses
Easy administration
HW scaled according to
manufacturing needs
Rich Technology Stack

FAST DEPLOYMENT

Easiness to Customize, Deploy &
Operate
Web interfaces - Deployments
without downtime
Reuse / maintain legacy
manufacturing elements,
connecting them to
cmManufacturing's Next
Generation environment

SCALABLE, ROBUST AND EASY TO MANAGE

Real-time system health
monitoring and diagnosis
Continuity for mission critical
operations
Scales together with your business
Leverage your HW investment
Simple administration

SCALABILITY
QUICKLY ADD HW
FOR HIGHER OUTPUT

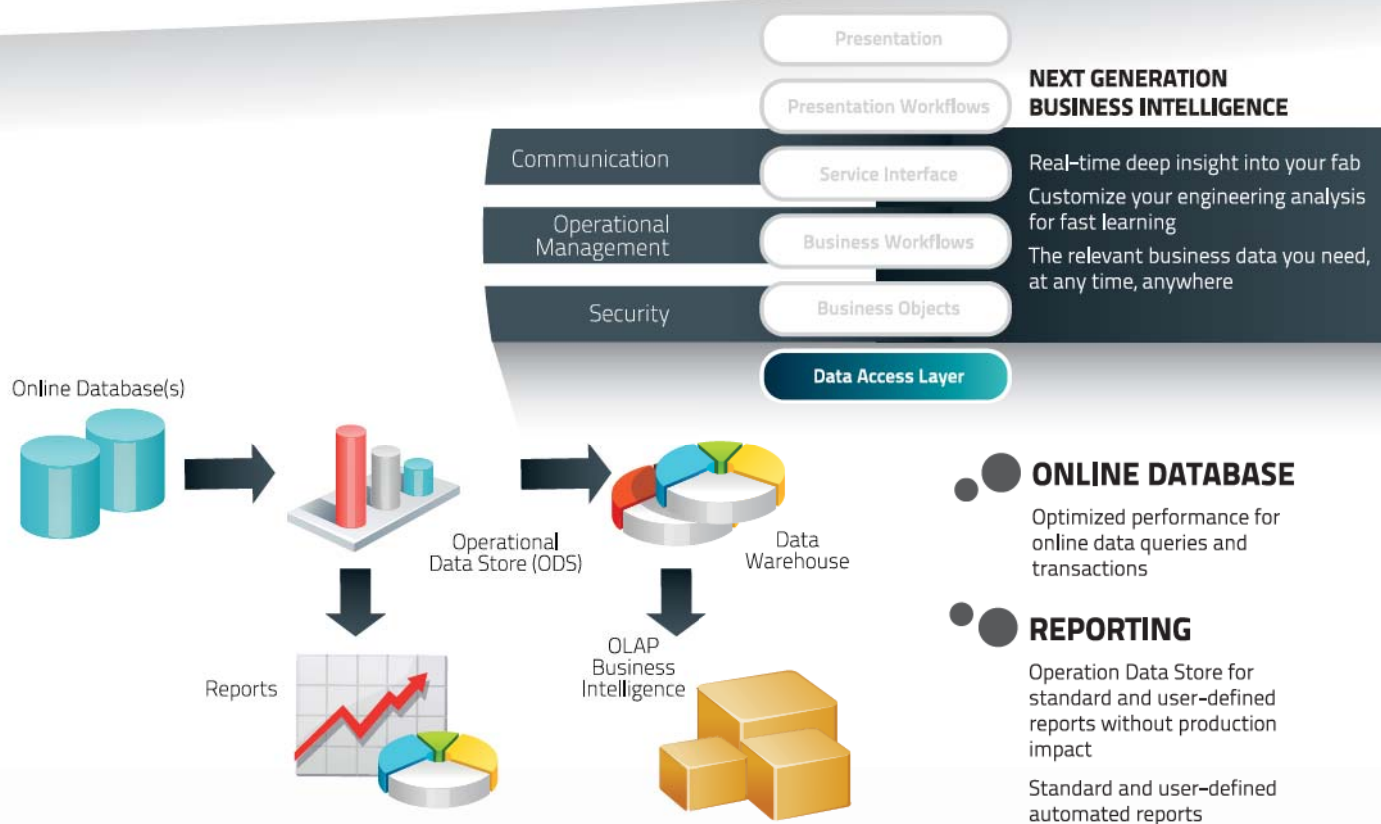
LOAD BALANCING
AND PERFORMANCE
ALGORITHMS

LATEST GENERATION
DISTRIBUTED SYSTEM
TECHNOLOGIES

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PERSISTENCY AND REPORTING LAYER

From Information to Business Intelligence



NEXT GENERATION PRESENTATION LAYER

From graphical interfaces to User eXperience



About Critical Manufacturing

Critical Manufacturing creates leading edge software solutions for the high-tech manufacturing markets of semiconductor, solar and electronics.

The company is part of Critical Group, a private group of companies founded in 1998 to provide solutions for mission and business critical information systems. Annual growth has been sustained at 50% per year on average since its foundation, operating a CMMI Level 3 and ISO9001 Quality System.

Critical Manufacturing is based on an experienced services team coming from Critical Group, and established a product team of individuals with more than 10 years experience in high-tech manufacturing.

The company comprises over 80 people, with its headquarters and main technical centre in Portugal and additional facilities in Germany and China.



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Critical Manufacturing is
a SEMI Corporate Member