

**LIFE
SCIENCES**

MANAGING MANUFACTURING COMPLEXITY IN THE LIFE SCIENCES INDUSTRY

GLOBAL MANUFACTURING CHALLENGES IN LIFE SCIENCES

How do we efficiently manage a growing number of regulatory SKUs across a dynamic supply chain?

How can we better synchronize material flows between suppliers, warehouse and production to remove idle inventories?

How can we ensure compliance with our disparate, legacy IT solutions in manufacturing operations?



How do I seamlessly integrate UDI/track and trace mandates into my global operations?

How can New Product Introduction (NPI) cycle times be reduced without negatively impacting product quality?

How can we support cost reductions and continuous improvement programs in a regulated environment?

How do I create the eDHRs?

3 CRITICAL ISSUE AREAS FOR LIFE SCIENCES MANUFACTURING

1

NEW PRODUCT INTRODUCTION/ ECO MANAGEMENT

- Visibility into operations beyond ERP, KPI's, Management decision tools
- Material Synchronization: balance sheet vs customer service levels
- Contract manufacturing rising
- Multi-business manufacturing sites increasing

2

SUPPLY CHAIN OPTIMIZATION

- 65–70% '06 revenue obsolete by '10
- CE and FDA approval for growing ECO challenge

3

COST AND SPEED

- Compliance is a given
- Quality focus shifting from "test" to "design"
- Cost/quality yield

LEADING COMPANIES ARE DIGITALLY TRANSFORMING MANUFACTURING

**CONNECT
INNOVATION
WITH PRODUCT
DELIVERY**



**ENABLE
USERS WITH DATA
DRIVEN DIGITAL
INDUSTRIAL EXPERIENCES**



**EMPOWER
USERS WITH
MODEL-BASED DECISION
SUPPORT**



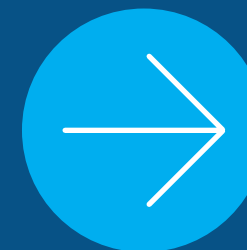
DIGITAL MANUFACTURING CREATES DIGITAL CONTINUITY

**SO WE CAN
TRANSFORM MANUFACTURING
WITH YOUR IMAGINATION**

**AND
DELIVER
UNIQUE VALUE**



Increase agility



Accelerate speed

3DEXPERIENCE MANUFACTURING





COLLABORATE: DIGITALIZE THE MANUFACTURING SHOP FLOOR

DIGITAL CONTINUITY IMPACT

- Establishes a new technology foundation for the Factory of the Future and Digital Continuity
- Manages Lean, Operational and Performance activity, data and analysis
- Provides ad common understanding across daily activities and business goals

STRONG ROI

- Saves time and effort by automating existing manual processes
- Reduces the need for point solutions, and costs, over time

EMPOWER THE MANUFACTURING TEAM

- Digitalizes the daily '5 Minute Meeting'
- Seamlessly moves between Lean, KPIs, Operations and continuous improvement activities
- Drives sustainable continuous improvement with simple to use interface

ENGINEER: MODEL AND SIMULATE YOUR GLOBAL INDUSTRIAL OPERATIONS

DIGITAL CONTINUITY IMPACT

- Creating executable process plans ensuring manufacturability
- Virtual build verified plans driving the planning process

STRONG ROI

- Accelerated new product introduction—getting it right virtually before production begins
- Increased manufacturing engineering efficiency

COMPREHENSIVE DIGITAL MANUFACTURING OFFERING

- Process Planning; Assembly Process and Ergonomic Simulation; 3D Work Instructions; and Machine and Robotics Programming
- Single 3D data model across engineering and manufacturing





OPERATE: SYNCHRONIZE AND EXECUTE YOUR GLOBAL INDUSTRIAL OPERATIONS

DIGITAL CONTINUITY IMPACT

- Expand digital continuity with closed loop product data and process flows
- Ramp Time to Volume across sites and enable real-time decision support to drive asset utilization, responsiveness

STRONG ROI

- Increased operating margin from operational improvement across global sites
- Improved product quality and customer responsiveness to meet demands

BEST IN CLASS MANUFACTURING OPERATIONS MANAGEMENT

- Visibility, control & synchronization across all manufacturing operations
- Comprehensive, actionable intelligence, traceability and reporting

OPTIMIZE: SCHEDULE AND PREDICT YOUR GLOBAL INDUSTRIAL OPERATIONS

DIGITAL CONTINUITY IMPACT

- **3DEXPERIENCE** platform for Business Operations Planning linking demand, capacity and design for NPI decision support
- Dynamic re-planning driven by real-time operational information

STRONG ROI

- Planned outcomes to maximize business goals
- Fast and efficient responses to customers, change and events

LEADERSHIP IN OPERATIONS PLANNING AND OPTIMIZATION

- Platform for all needs: Strategic to tactical decision support
- KPI-based planning with real-time decision support
- Record-breaking optimization processing speed



THE BENEFITS OF DIGITALLY TRANSFORMING MANUFACTURING

Faster
time-to-volume

'Right first time'
quality

Nimble holds,
releases and
disposition of
potential defects

A platform for
continuous
improvement

A lower cost
of higher quality

Operational driven
manufacturing
and operational
intelligence

A platform for
all new regulatory
needs

OSSTEM IMPLANT

GENERATING VALUE

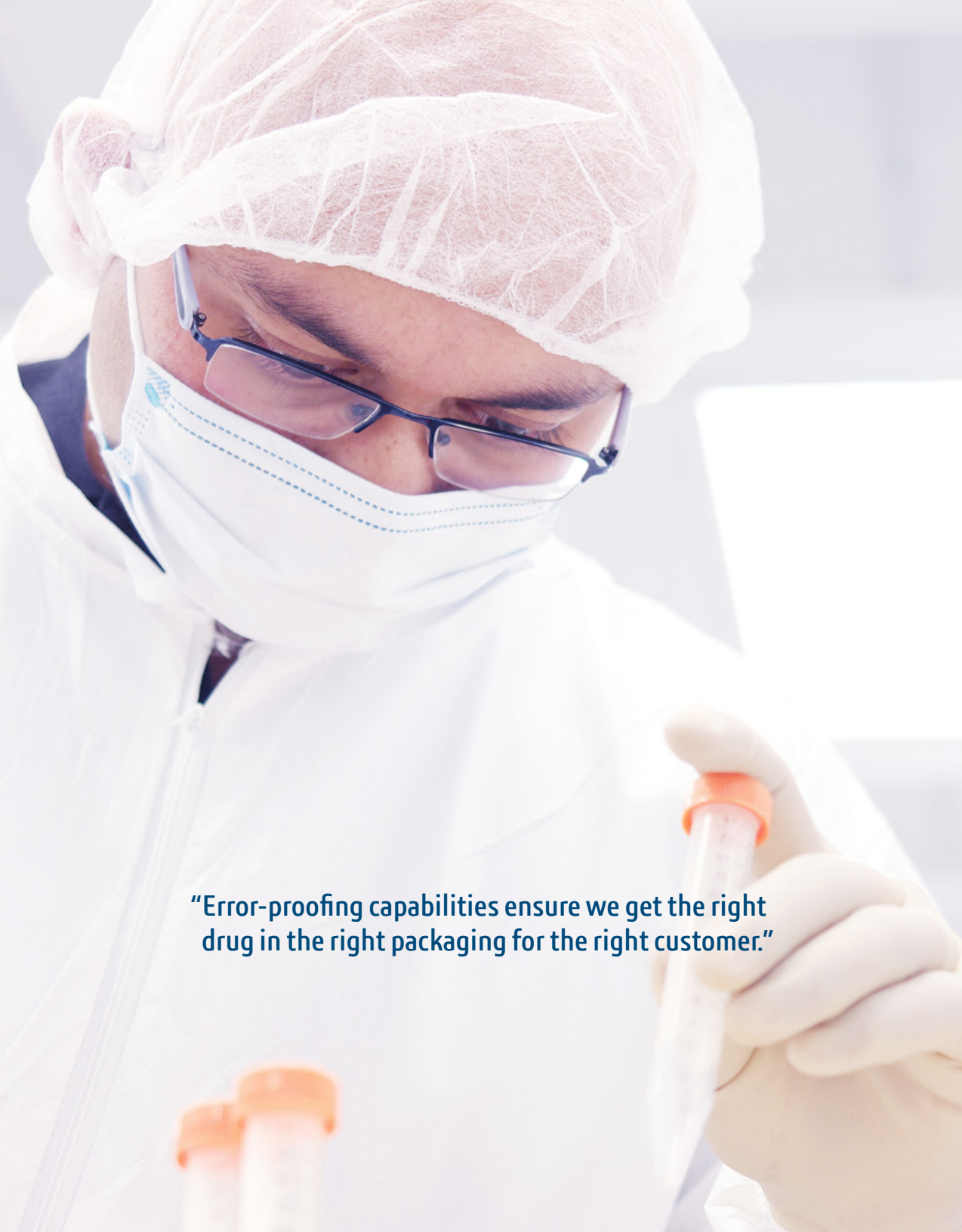
- Increased efficiency and accuracy of product quality control
- Improved visibility with globally managed UDI (Unique Device Identification) information
- Reduced time to market with more efficient management of governmental regulations
- Improved patient safety and simplified medical device innovation with full traceability of any quality issues

> [CLICK TO ACCESS CASE STUDY](#)



"With Dassault Systèmes 3DEXPERIENCE® platform, we enhance business efficiency and develop higher-quality medical device products that comply with international regulations."

OSSTEM[®]
IMPLANT

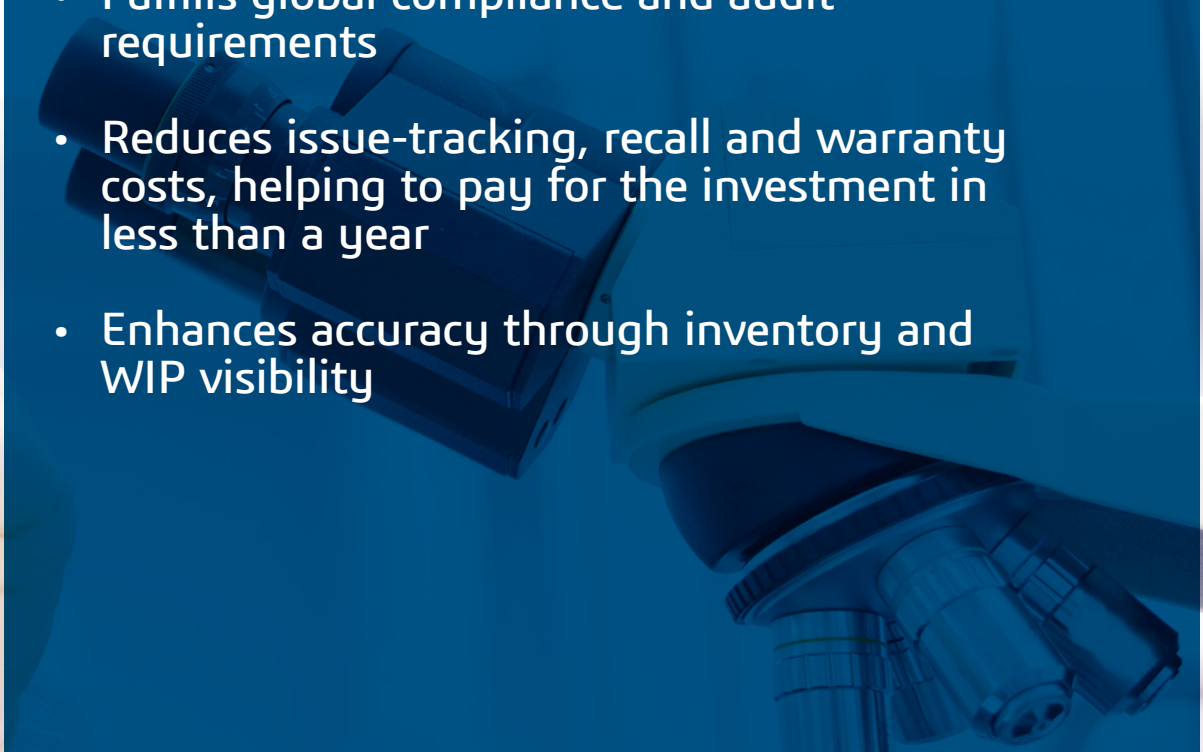


“Error-proofing capabilities ensure we get the right drug in the right packaging for the right customer.”

GLOBAL PHARMACEUTICAL COMPANY

GENERATING VALUE

- Real-time traceability from receiving, weighing, formulation and packaging to PPC
- Fulfills global compliance and audit requirements
- Reduces issue-tracking, recall and warranty costs, helping to pay for the investment in less than a year
- Enhances accuracy through inventory and WIP visibility



LEARN MORE AT

[IFWE.3DS.COM/LIFE-SCIENCES](https://ifwe.3ds.com/life-sciences)

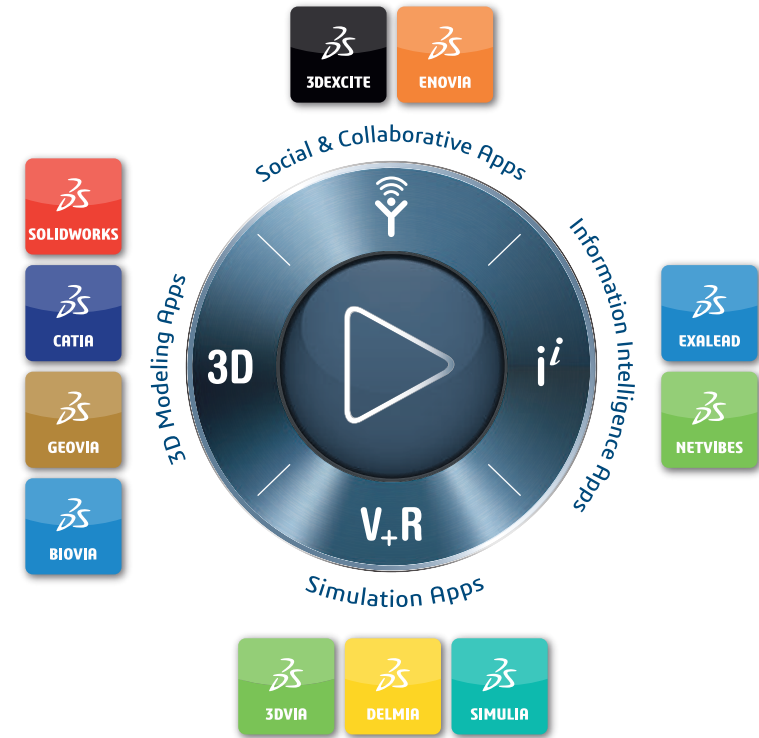




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Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

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