Newsletter

July 2025

Welcome to our Newsletter

Summer's here!
It's that time of year when many of us are packing our bags and heading off on summer adventures with family and friends — and the MOMi team is no exception!

But before we switch off and soak up the sunshine, we're excited to share the latest edition of MOMi's Newsletter with you.

In this 16th edition, we dive into:

- **ISA-95 Education** – Discover why this standard is essential for IT/OT convergence and driving digitalisation in manufacturing.
- **Business Consultancy in Focus** – We explore **Autonomous Maintenance by the Operator**, unpack **What's new in ISA-95 Part 1**, and spotlight **Business Continuity Management (BCM)**, where **Mathijs Philips** asks the vital question: *Is your factory ready when the unexpected happens?*

As always, if MOMi can support your manufacturing journey, feel free to reach out to myself, Gerard Ipskamp, or Mathijs Philips.

Enjoy reading the MOMi Newsletter, and don't forget — all previous editions are available at: www.mom-institute.org/newsletter

Please, let us know if you have any questions either via our website or by e-mailing me directly Sarah.Knight@mom-institute.org.

Sarah Sullivan
MOMi Team Lead
Global Education Program Manager

About MOMi

The Manufacturing Operations Managament Institute (MOMi) is an *Expert* Division of ATS Global.

MOMi offers best-practice business consultancy services to support the full change cycle in a dynamic operations environment and provides strategic and tactical advice to manufacturers, delivering the 4th Industrial Revolution.

MOMi provides independent education programs to manufacturers, preparing their people to leverage new smart technologies through the power of knowledge.

Our team has extensive experience in supporting manufacturers around the globe and provides best-practice services to help them to continuously improving their performance (step-by-step).

MOMi's consultants and instructors work from a pragmatic basis to deliver effective, deployable strategies. MOMi's team consists out of independent, professional experts in the domain of Manufacturing Operations Management.

More: www.mom-institute.org

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Latest News

In June, our colleague **Sarah** tied the knot with her long-term partner **Marc**! The day was filled with fun, laughter, and celebration, shared with close family and friends at their local pub.

If you've noticed a change in Sarah's surname — mystery solved!

To mark the occasion (and in true MOMi style), we've shared a light-hearted LinkedIn post comparing **marriage and MES** — offering some useful advice for Marc and a reminder of how *crucial* communication is in both!

Be sure to check it out — and as always, the MOMi team is here to support your **MES journey** through expert **consultancy** and **education**.

You can follow our LinkedIn page MOM-Institute

#MOMi #MES #ManufacturingLife #SmartManufacturing #HappyNews #TeamUpdate #DigitalTransformation

Education in Focus!

Why Your Team Needs ISA-95 Training?

By Gerard Ipskamp

In today's connected factories, seamless collaboration between IT and OT teams isn't just beneficial, it's business-critical. But too often, integration projects stall due to gaps in communication, misaligned expectations, and unclear data handoffs between systems.

That's where the **ISA-95 standard** becomes a powerful tool.

What is ISA-95?

ISA-95 is the global standard for integrating enterprise systems (like ERP) with control systems (like MES, LIMS, PDM/PLM, SCADA, and PLCs). It defines how different levels of manufacturing, from plant-floor automation to business planning, should communicate, share data, and operate together.

For those in middle management and engineering roles, ISA-95 isn't theoretical—it's practical. It gives you a structure to design smarter, more predictable, and more scalable solutions.

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Why Training Matters for Your Teams

1. **Align IT and OT Around a Common Framework**. ISA-95 provides a shared language that reduces misinterpretation between software engineers, control engineers, and project managers. With everyone on the same page, cross-functional projects run faster and smoother.

2. Reduce Integration Risks. Many digital projects fail not because of the technology, but because of fuzzy system boundaries and mismatched data expectations. ISA-95 helps teams clearly define:

- What data is exchanged
- When it's exchanged
- Who owns it

This structure eliminates guesswork during MES/LIMS/PDM-PLM/ERP/PLC integration.

3. Design Smarter Architectures. If you're architecting these solutions, ISA-95's models guide you in mapping system layers and functions correctly. This is critical when building systems that need to scale or adapt to future Industry 4.0 initiatives.

4. Support Consistent Operations Across Sites. For companies managing multiple facilities or global operations, ISA-95 offers a blueprint for standardizing how production, quality, inventory, and maintenance are managed and measured.

5. Prepare for Smart Manufacturing & IioT. As systems become more connected, through cloud platforms, edge devices, and AI-driven analytics, having clean, well-modeled interfaces between IT and OT is non-negotiable. ISA-95 sets the foundation.

Whether you're managing MES rollouts, integrating plant-floor data with ERP, or scoping a new smart factory initiative, **ISA-95 should be part of your team's vocabulary**.

Investing in focused ISA-95 training equips your engineers, analysts, and technical leads with:

- The ability to design standardized, scalable solutions
- Tools to document and validate integration requirements
- Better collaboration with vendors and cross-department teams

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If your team is responsible for connecting systems, defining data flows, or improving operational visibility, ISA-95 training will pay dividends—reducing project risk, improving interoperability, and accelerating time to value. Let's stop treating IT-OT alignment as a challenge—and start treating it as a skillset.

Picture from: https://www.isa.org/intech-home/2017/november-december/features/isa-95-to-support-smart-manufacturing-iiot

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Business Consultancy in Focus

Is your factory ready when the unexpected happens?

By Mathijs Philips

Business Continuity Management (BCM) focuses on protecting manufacturing operations from disruptive events—such as supply chain disruptions, power outages, cybersecurity incidents, or workforce related events. While prevention is the preferred approach, BCM also prepares for an effective response and faster recovery when disruptions occur.

Although BCM is not solely an IT or OT function, both play a crucial role in BCM. As companies become more reliant on digital systems, well-structured IT and OT environments increasingly support business continuity. Conversely, poorly managed IT and OT systems can become significant operational risks.

Some key IT and OT practices that support BCM:

- **Network Security and Device Management**: Balance connectivity with protection. Implement network segmentation (zones) and secure conduits to control access.
- **System and Network Monitoring**: Track system use and performance and detect anomalies or access threats early.
- **Configuration Management**: Maintain up-to-date configurations of IT and OT systems to enable recovery after disruptions.
- **User Account Management**: Ensure proper access control through structured onboarding/offboarding and role-based permissions.
- **Data Backup and Restore**: Regularly back up shopfloor data and, critically, test the ability to restore it.

From a corporate perspective, promoting BCM awareness at manufacturing sites is important. But awareness is probably not the only thing: to offer guidance and support to local IT and OT teams is important as well. While the listed practices may seem straightforward, their implementation often involves hidden complexities, and the stakes can be high. For example, don't be surprised to find that backups may be performed regularly, yet no one may have tested a restore—due not to oversight but to concerns over complexity, support, or impact.

Standards for Guidance:

- **ISO 22301** offers a framework for assessing business continuity risks and implementing a BCM system.
- **ISA 62443 and the NIST standard** provide comprehensive guidance on securing industrial automation and control systems.

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Implementing BCM is not just about risk prevention—it is about ensuring operational resilience when the unexpected happens. And a strong IT and OT organisation in the site helps to make this happen.

What is new in ISA-95 part 1?

By Gerard Ipskamp

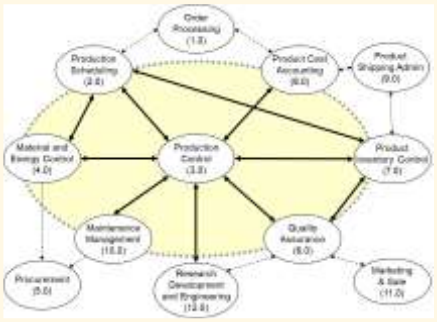
On April 10, 2025, ISA released a new version of the ISA95 part 1 standard. This update to the 2010 version of ISA-95 Part 1 includes changes to reflect specific functions in the enterprise, highlight the boundary between enterprise and manufacturing and control domains and introduce consistency with other details in the standard.

While reading this new release the following observations were made.

- Refines the boundary between enterprise and manufacturing control domains. Aligning terminology and scope with other ISA-95 parts. Clarifies specific enterprise functions and the information flows at their interface.

- Data-Centric and Metadata-Enriched Approach

  Enriches raw data with standardized metadata (batch IDs, equipment IDs, timestamps, context layers) to support analytics, AI, and auditing. Strengthens shared ontologies and semantic standardization to improve interoperability.



- Revised Conceptual Model (Figure 7)

  Figure 7 now combines functional and information views, providing clearer semantic orchestration, especially in Level 3

Picture from: ANSI/ISA-95.00.01-2025

- Level 3: A Semantic Orchestration Layer

  Redefines level 3 beyond traditional MES. It now coordinates data, workflows, and decisions across systems, supporting dynamic scheduling, real-time quality control, and automated exception handling.

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Autonomous maintenance by the operator

By Gerard Ipskamp

In today's competitive manufacturing environment, equipment uptime and process reliability are more critical than ever. One of the most impactful strategies to boost equipment performance and reduce unplanned downtime is Autonomous Maintenance (AM). This is a foundational pillar of Total Productive Maintenance (TPM).

But how can manufacturers make Autonomous Maintenance effective on the shop floor?

By involving operators directly in equipment care, organizations promote a culture of ownership, reduce breakdowns, and improve Overall Equipment Effectiveness (OEE). And integrating this approach into the Manufacturing Execution System (MES).

What is Autonomous Maintenance?

Autonomous Maintenance empowers machine operators to take on routine maintenance activities normally reserved for maintenance technicians. These include beside others:

- Cleaning and inspection
- Lubrication and tightening
- Detecting wear and abnormalities
- Logging observations and small fixes
- Triggering maintenance support when needed

Requirements to MES to Support Autonomous Maintenance

Guide and Track Operator Tasks

- Provide digital work instructions and step-by-step checklists for tasks like cleaning, inspection, or lubrication.
- Allow tasks to be scheduled regularly or triggered by run-time hours, alarms, or warnings.

Capture and Act on Observations

- Enable operators to log issues such as leaks and unusual noises.
- Allow operators to attach photos, notes, or audio recordings.
- Automatically generate maintenance requests or escalate tasks to technical support when needed.

Support Traceability and Compliance

- Maintain a full audit trail of all maintenance actions, who performed them, and what was found.

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- Archive records for compliance, safety, and continuous improvement reviews.

Integrate with Plant Data

- Connect with SCADA/PLC systems to display real-time data (temperature, vibration, runtime) on operator terminals.
- Visualize trends and equipment history to help operators detect early signs of possible problems.

Enforce Training and Qualification

- Ensure only qualified and trained operators perform AM tasks by integrating with HR or Learning Management Systems (LMS).

Support Traceability and Compliance

- Maintain a full audit trail of all maintenance actions, who performed them, and what was found.
- Archive records for compliance, safety, and continuous improvement reviews.

To fully realize Autonomous Maintenance, the MES must integrate with the following systems. But that will be different for every company depending on the existing application landscape:

CMMS/EAM for maintenance work order generation and maintenance tracking

SCADA/PLC/IoT for live condition monitoring and alerting

ERP Systems for equipment master data and downtime tracking

LMS/HR Systems for managing training, qualifications, and certifications

Document Management/QMS for SOP version control and compliance records

Example process for unplanned downtime event

- The operator notices the event and notes down the needed information
- For a limited time, the operator is allowed to try to solve the issue. Registration of the work, time and material used on an AM-workorder in MES. This information will be sent to CMMS/EAM.

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- After that time when the issue is not solved a notification is created and sent to the maintenance solution. The event and the notification are visible on the asset/equipment and on the active order(s).
- A maintenance engineer with a workorder in CMMS/EAM solves the issue.
- The operator is responsible for starting up and accepting the solution.
- The event and all that happened will be visible in the audit trail, production record and critical other objects. This might for example result in preventing an automatic release of material or triggering an additional inspection.

What our Customers Say…

Novotek

"Thank you for the great training and inspiring discussions. The course gave practical improvement ideas for our value delivery model to reach higher value by utilizing standard products more rapidly in customer projects. I found the manufacturing strategy/maturity, enterprise architecture, and process design perspectives most intriguing."

Sakari Aulanko, Technology & Innovation Lead at Novotek Oy
MESA Methodologies CoC

Royal Swinkels **Master Data Quality and PLM/LIMS Selection**

"MOMi has been fantastic in helping us select both a PLM and LIMS system. Thanks to their expertise and guidance, the entire process was very structured and efficient. Gerard Ipskamp, with his expertise and sharp insights, guided us through the entire selection process and ultimately helped us make an informed decision.

Thanks to MOMi, we were able to select the right suppliers within a short period of time. Their approach was professional and goal-oriented, and with their guidance, we were able to identify the best options for our organization.

We are very pleased with our collaboration with MOMi and Gerard Ipskamp and would definitely recommend them to other companies looking for a PLM or LIMS system. MOMi helped us in making this important decision, and we are confident that with their help, we made good choices."

Marye Klaasen; Head of QESH; Swinkels

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Education Schedule

MOMi's education programs are delivered as public sessions as well as in-house. In the last case, the content can be tailored to your specific situation.

Please ask Sarah Sullivan for more details about In-house programs, typically for 10 participants or more, or if you want to participate with a smaller group, discounts are available.

For more information and registration, see our website.

Course Title	Days	Date	Time (CET / EDT)	Location	Fee
Applying ISA-95: All You Need to Know!	4	July 22, 2025	14:00–18:00 / 08:00–12:00	Online	€ 2,460
MESA MES/MOM Certificate of Competency	5	July 28, 2025	14:00–19:00 / 08:00–13:00	Online	€ 4,000
MES: All You Need to Know!	4	August 5, 2025	14:00–18:00 / 08:00–12:00	Online	€ 1,940
LIMS in Manufacturing: All You Need to Know!	2	August 12, 2025	14:00–18:00 / 08:00–12:00	Online	€ 1,120
Business Case to Justify MOM Investments	2	August 14, 2025	14:00–18:00 / 08:00–12:00	Online	€ 1,120
MESA Certificate of Awareness Refresher – CoAR1	2	September 8, 2025	14:00–18:00 / 08:00–12:00	Online	€ 1,200
MESA MES/MOM Certificate of Awareness	3	September 9, 2025	10:00–16:00	Online	€ 2,450
MESA MES/MOM Certificate of Awareness	3	September 9, 2025	11:00–16:00	Online	€ 2,735
MESA Certificate of Competency Refresher - CoCR2	3	September 10, 2025	14:00–19:00 / 08:00–13:00	Online	€ 2,000
MESA MES/MOM Certificate of Competency	5	September 29, 2025	11:00–16:00	Online	€ 4,465
MESA MES/MOM Certificate of Competency	5	September 29, 2025	10:00–16:00	Online	€ 4,000

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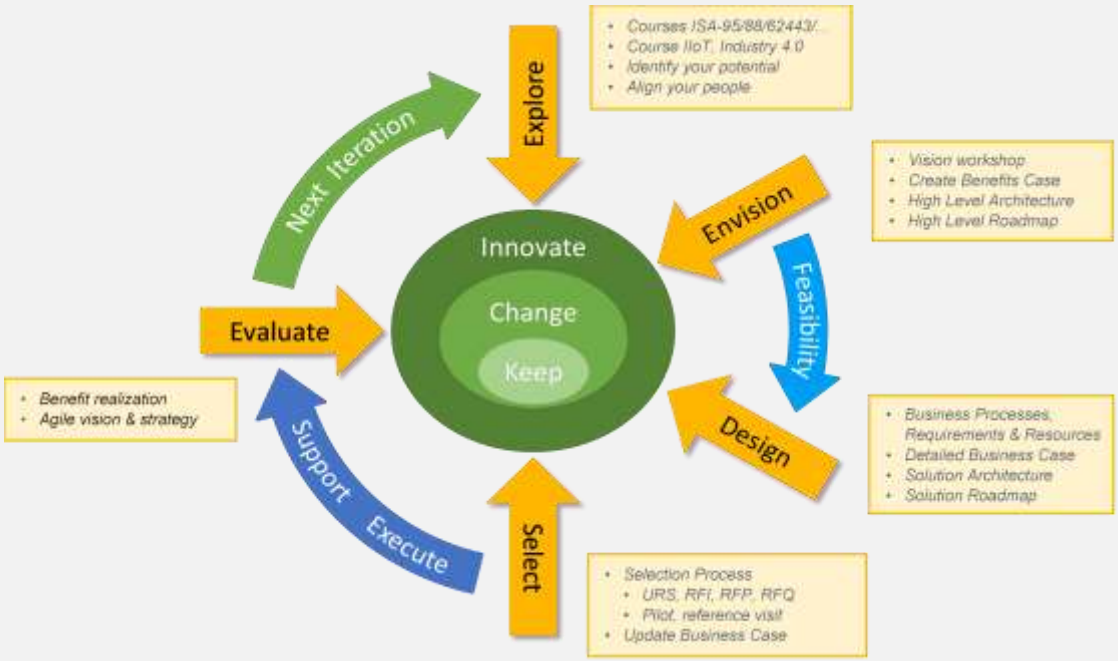
MOMi Business Consultancy: Control the Business Change Cycle



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MOMi Education: A Comprehensive Set of Programs

- Smart Manufacturing and Industry 4.0 strategy
- MES/MOM for Executives

- MOM related ISA Standards
- Cyber Security
- MESA MES/MOM Global

- Manufacturing Maturity
- Business and IT Alignment
- MOM Centre of Excellence

- Metrics Framework
- Continuous

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