Digital Factory Transformation
Digital Logbook Solution
Supply Chain Wizard – Services & Solutions for Digital Supply Chain

Management Consulting

- Program Setup & Strategic Planning
- Project Management & Implementation / Integration
- ROI / Value Beyond Compliance & Sustainability

Serialization (Track & Trace) Consulting

- Supply Chain Strategy Design
- E2E Process Optimization
- Process Automation
- Advanced Analytics
- IoT & Big Data
- Blockchain & SC Security

Strategy | Execution | Transformation

Software Solutions

- Supply Chain Management
- Supply Chain Projects
- Supply Chain Digital

- Digital Retail
- Digital Factory
- Digital Transportation
- Digital Warehouse
- Digital Supply Chain

- Management Dashboard
- Product Dashboard
- SC Transfer
- SC Tracker
- SC Security
- SC Scheduler
At Pharmaceutical sites, all activities should be recorded to logbooks to comply with GMP regulations. Having manual logs such as written or excel sheet logbooks are of common practice. This limits the further analysis of the logs. Maintaining the logbooks become too costly when manual methods are used and security concerns arise.

**Industry Challenge**

**What you get?**
- Digitize all room logs capturing line activities within the factory floor
- Access your data at all times and instantly
- Improve security and quality by using personal digital signatures to sign and approve activities
- Comply with GMP regulations

**How does it work?**
- Supply Chain Wizard installs Digital Logbook in 1 day at client site
- Line operators log each activity / task with only 2 clicks or touch
- Multiple levels of security ensure the GMP compliance of the logbook
- Logbook data is stored digitally and is accessible at all times for further analysis or audits

**Why you need it?**
- **Operator Friendly:** Digital Logbooks removes the need of paper logs or manual registry methods
- **Performance:** Ability to analyze site activities by capturing them instantly and analyzing them to optimize performance
- **Anomaly detection:** Understand “regular” vs. “unexpected” events/activities with machine learning algorithms
- **Save Time:** instant access to current and historical logs during approvals or audits
Track & Trace Compliance

Impact to the Factory:
- Reduced OEE
- Reduced Throughput
- Higher Maintenance
- More Rejects
- Higher Overtime
- Higher COGS

DATA
- Quality Events
- Line Performance
- Activity Data
- Maintenance Data
- Labor Data
- Environmental Data
- Financial Data

DASHBOARD
- OEE / Performance
- Labor / Asset Analysis
- Capacity / Utilization
- Cost of Goods Sold

SCW Digital Transformation Journey

DECISIONS
Scheduling:
- Line / Staff Scheduler

Planning:
- Demand / Capacity / Inventory / Supply

Maintenance:
- Planned / Predictive
- Asset Replacement

OEE TRACKER
LABOR TRACKER

Digital Factory Journey
Managing and maintaining information is difficult:
- Each Pharma site keeps 100s of paper based logbooks
- There are 6+ different types of logbooks
- 1000s of logbooks are actively managed or archived at a given company

All logbooks should comply GMP rules

GMP Compliance is a challenge:
- All logbooks are paper based
- Archiving requirements for years
- Readily available for addressing issues on site
- Audit trails
- Structurally organized, indexed, traceable logs

Paper based logbooks present difficult challenges

Very expensive & effort-heavy w/ limited to no value:
- Difficult to maintain / archive
- Long and difficult analysis for annual product reviews
- Expensive to maintain, store, retrieve and analyze

GMP Compliance
Digital Logbook – Solution

GMP Compliant

Compliant with requirements
Control over all processes
Live & central quality checks & approvals

Digital Logs

Digitally available logs
Faster reaction times to audits
Better security with digital authentication

Fits to Pharma 100%

Developed with Pharma Clients with detailed URS
Flexible & Scalable
Historical logs
Approvals
Audit trail
Daily local backups
Digital Logbook – Additional Benefits

Microsoft Partnership

Microsoft co-development investment on Azure
Microsoft One Commercial Partner program
Better security and scalability with Azure Hybrid-Cloud

Reporting & Analysis

Seamless integration to OEE Tracker
24/7 live access to all logbooks w/ advanced analysis
Integrated to ERP Database (optional)
Why Digital Logbook with Blockchain?

**CONVENTIONAL LOGBOOKS**
- Paper based
- Slow Reaction Time to Audits
- Difficult to Consolidate & Analyze
- Expensive to Maintain

**DIGITAL LOGBOOK**
- 100% digital & Pharma-grade
- Audit-ready & Transparent
- Real-time Access & Analysis
- Secure & Easy to Maintain, Affordable

**BLOCKCHAIN**
- Immutable, Protected
- Fraud-proof Accountability
- Decentral, Business Cont.
- High Compliance

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The Digital Logbook – Home Screen

Hierarchical Structure of ‘Loggable’ Objects

Event Details

Log Events

Check-in, Check-out Functions & User History

Log History
### The Digital Logbook – Approve Screen

The image illustrates the interface of the Digital Logbook approval screen. Here are the key features:

- **Log Filters to Quick Access**: Allows you to quickly filter the log by date range, object, event, batch number, and status.
- **Approval Status**: Shows the current status of each log entry, such as Not Approved, Supervisor Approved, QA Approved, and Admin Approved.
- **Approval Details**: Provides specific details about the approval, including the user, timestamp, and comments.
- **Log History & Edit Status**: Tracks the history of each log entry and allows editing of the status.
- **Flexible Multi-level Status**: Offers multiple status levels for more granular control.

### Log Approve - QA

<table>
<thead>
<tr>
<th>Object</th>
<th>Event</th>
<th>Activity Type</th>
<th>Product ID</th>
<th>Batch Nr</th>
<th>Start Time</th>
<th>End Time</th>
<th>Status</th>
<th>Comments</th>
<th>Approved By</th>
<th>Approve Time</th>
<th>Action</th>
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<td>Labeler</td>
<td>Line Upgrade</td>
<td>Equipment Upgrade</td>
<td>PRODUCT3-ID9876</td>
<td>B12345</td>
<td>2018-03-05 14:12</td>
<td>2018-03-05 14:13</td>
<td>Supervisor Approved</td>
<td>test</td>
<td>Adam</td>
<td>2018-03-05 18:05</td>
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<td>Stop</td>
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<td>Check out</td>
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<td>Check in</td>
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<tr>
<td>Start</td>
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</tr>
<tr>
<td>Capper Machine</td>
<td>Setup</td>
<td>Start Up</td>
<td>PRODUCT2-ID9876</td>
<td>B12345</td>
<td>2018-03-05 14:12</td>
<td>Continues</td>
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<tr>
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<td>Clean Up</td>
<td>Type B Cleanup</td>
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<td>B12345</td>
<td>2018-03-05 14:12</td>
<td>2018-03-05 14:13</td>
<td>Supervisor Approved</td>
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<td>Brain</td>
<td>2018-03-05 18:06</td>
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<tr>
<td>Capper Machine</td>
<td>Maintenance</td>
<td>Annual Maintenance</td>
<td>PRODUCT2-ID9876</td>
<td>C12345</td>
<td>2018-03-05 14:12</td>
<td>2018-03-05 14:12</td>
<td>Not Approved</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Site Logbook Hierarchy

For each logbook:
- Customizable ‘loggable’ status
- User or role specific access management
1. Introduction to Supply Chain Wizard
   Overview, Services, Solutions, References

2. Digital Logbook
   Digitize paper based logbooks

3. Digital Factory Journey
   Journey, Quick wins & Establishing fundamentals
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SCHEDULER
Potential Digital Factory Initiatives

Track & Trace Compliance
- OEE Tracker roll-out in Packaging & Manufacturing

Digital Factory Transformation
- Digital Logbook Pilot & Proof of Concept (PoC)
- Scheduler Pilot & PoC

Digital Factory Future
- Predictive Maintenance PoC using Logbook/OEE & IoT technology
Thank you