CODEL
SOLUTIONS & ENGINEERING

INDUSTRY 4.0

VERTICAL INTEGRATIONS

SMART FACTORIES

AIDA
SOFTWARE SUITE

WE ARE

DIGITALISING SMART FACTORIES

With the AIDA software suite, the client gets the ideal framework for the digitalisation of their production. Whether the goal is to connect up old machines, or integrate new modern ones, AIDA offers the platform to integrate them all. This includes gathering data from machines, sending data to machines, monitoring all production events, as well as materials, semi-finished goods, movements – it is true Total Production Management.

INDUSTRY 4.0

A combination of cyber-physical systems, the Internet of Things and the Internet of Systems make Industry 4.0 possible and the smart factory a reality. As a result of the support of smart machines that keep getting smarter as they get access to more data, our factories will become more efficient and productive and less wasteful. Ultimately, it's the network of these machines that are digitally connected with one another and create and share information that results in the true power of Industry 4.0. – This is exactly what AIDA is doing at your factory!

SCALABLE

The AIDA software suite today runs SME production lines and big factories with many different production lines. One of the main strengths of AIDA is its scalability, so whether the Client is a small, medium or large production company they get a robust solution: the same reliable framework, and choice of modules as needed for the business. You will always get the same reliable framework, and you can decide what modules you need for your business. As a business grows, it is easy to upgrade the system with additional modules and new functionalities with further tailoring as required.

UNLOCKING THE FULL POTENTIAL OF YOUR PRODUCTION

Data is the driver of business processes, and when harnessed properly, can boost organizations in unseen ways and even render outdated business models obsolete. The ability to harness its power is today's great differentiator. But with so much data at our disposal, putting it to action is an art form in itself. With the AIDA software and its modules it finally becomes possible to interpret and act on the data from the production floor such to boost future production performance and improve processes.
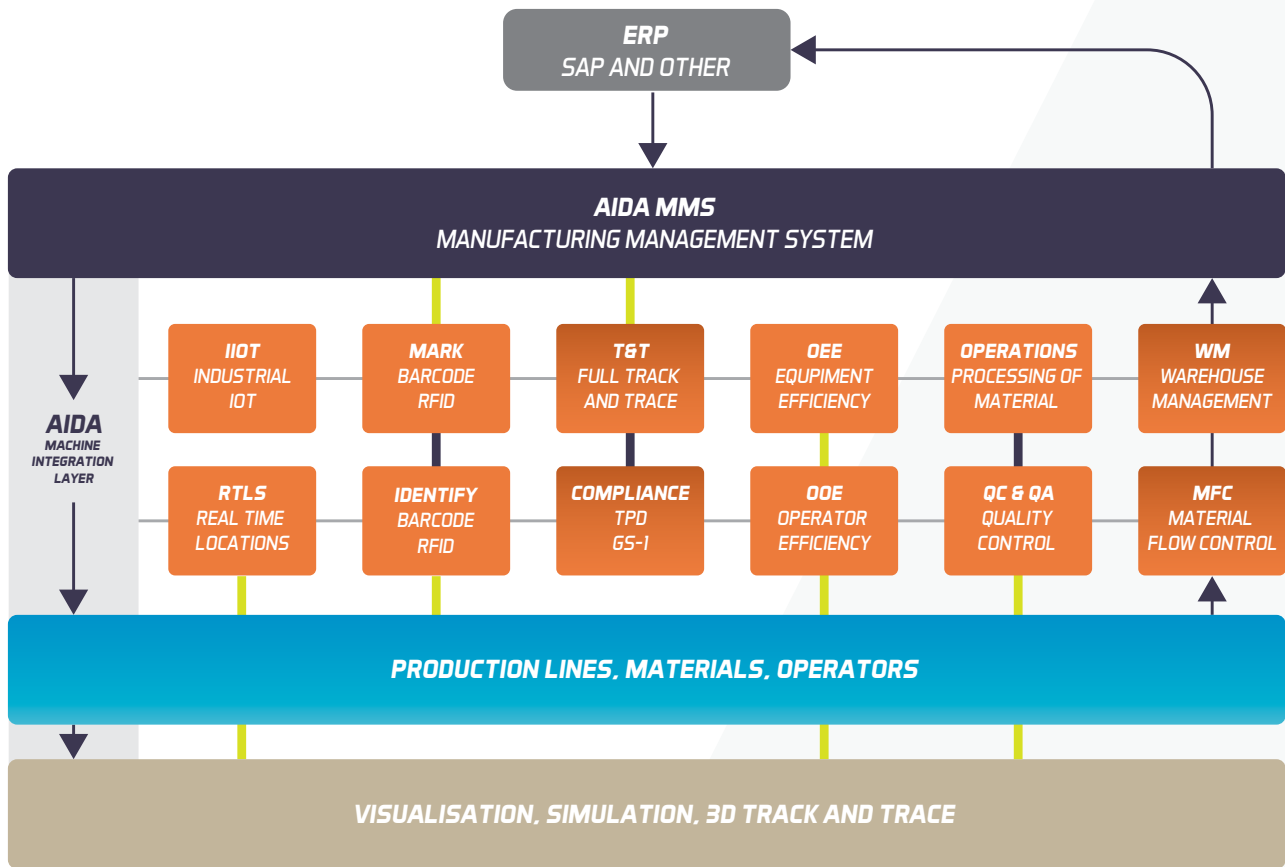
INTEGRATING WITH A RANGE OF ERPs

The AIDA software suite is focused on vertical and horizontal integration across the whole production floor. AIDA integrates with almost every ERP system and has unlimited options for connectivity with machines, sensors, etc. Implemented fully, it offers a well connected and integrated production system whose reliability is absolute.

REVEALING THE HIDDEN FACTORY

Many manufacturers may desire to increase throughput and revenues, but are hesitant to invest in new equipment, expand their factory footprint or add a second shift. The best solution is to release the untapped capacity held within the hidden factory.
With AIDA software suite you will have access and real time visibility of all processes in production. Combining this with all the data gathered in real time enables Managers to identify all bottlenecks, loses, wasteful operations, and in the end make changes that will increase productivity.

AIDA
SOFTWARE SUITE

ERP
SAP AND OTHER

AIDA MMS
MANUFACTURING MANAGEMENT SYSTEM

AIDA MACHINE INTEGRATION LAYER

IIOT INDUSTRIAL IOT	**MARK** BARCODE RFID	**T&T** FULL TRACK AND TRACE	**OEE** EQUIPMENT EFFICIENCY	**OPERATIONS** PROCESSING OF MATERIAL	**WM** WAREHOUSE MANAGEMENT
RTLS REAL TIME LOCATIONS	**IDENTIFY** BARCODE RFID	**COMPLIANCE** TPD GS-1	**OOE** OPERATOR EFFICIENCY	**QC & QA** QUALITY CONTROL	**MFC** MATERIAL FLOW CONTROL

PRODUCTION LINES, MATERIALS, OPERATORS

VISUALISATION, SIMULATION, 3D TRACK AND TRACE

AIDA is unique system that integrates industrial machines, production processes and data exchange with ERP systems e.g. SAP.

MODULES

WM
WAREHOUSE MANAGEMENT

OEE/OOE
OVERALL EQUIPMENT AND OPERATOR EFFICIENCY

MES/MFS
AIDA MANUFACTURING EXECUTION AND MATERIAL FLOW

TRACK&TRACE
MARKING, IDENTIFYING, TRACKING AND TRACING

RTLS-VIS
AIDA REAL TIME LOCATION AND VISUALISATION SYSTEM

QC/QA
QUALITY CONTROL AND ASSURANCE

OEE / OOE

With all the data gathered from various systems and machines in production, AIDA makes visible how well manufacturing resources are utilized (facilities, time, and materials). OEE is the single best metric for identifying losses, benchmarking progress, and improving the productivity of manufacturing equipment (i.e. eliminating waste). The workforce, as the crucial part of the production system, can be a part of the metric system to measure Overall Operators Efficiency too.

REAL-TIME POSITION TRACKING

AIDA provides essential top-down overviews of line production tracking, with options to display data using 3D model overlays of the production floor, to detect quickly where and in what phase some product order is, where bottlenecks are present etc. All this data helps to improve processes and engenders greater agility and precision in production planning.

SHOP FLOOR DATA COLLECTION >> IIOT

One of the main advantages of AIDA is its ability to connect to various systems and machines in production. AIDA collects, processes, and analyses that data. It thus offers an authoritative source to drive reporting, ad-hoc analysis, planning, and the future improvements of operations and production itself e.g., Edge Computing, Fog Computing. The best approaches undoubtedly offer prospects for the best results.

ADVANCED ANALYTICS AND REPORTING

Making faster decisions and prioritizing actions to drive constant improvement in your production are the immediate consequences of the new view of the organisation offered by AIDA. We have developed many standard reports and analytic tools, and we can quickly develop new as well as customize standard modules upon client request.
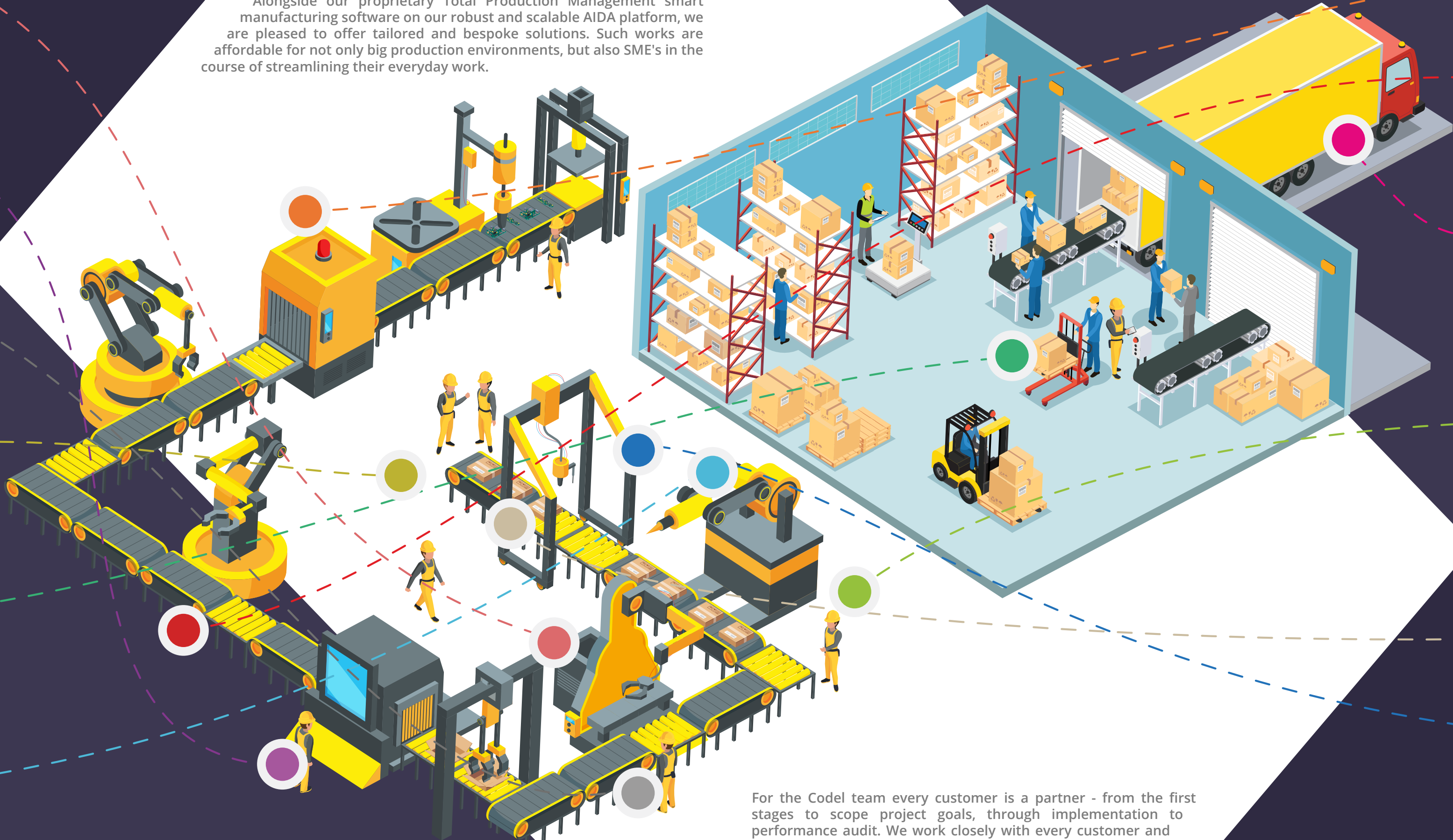
FULL INVENTORY SYSTEM (WMS)

The fully-featured warehouse management system is an integral part of AIDA. It gives easy control of the storage and movement of materials within warehouses. It manages process transactions on materials which include shipping, receiving, put-away, and picking. It has built-in customizable location management and FIFO/LIFO/FEFO product flow management. All information about these transactions are shared with other business systems (e.g., SAP).

MATERIAL FLOW CONTROL

Material flow control enables control over raw materials or semi-finished goods consumption according to the serial number, batch, operator, machine, and production order.

Our team combines almost 30 years' experience in manufacturing software development with current best practice in Industry 4.0, Lean management, Smart factories and IIoT to give each customer cost-effective solutions tailored to their individual requirements.

Alongside our proprietary Total Production Management smart manufacturing software on our robust and scalable AIDA platform, we are pleased to offer tailored and bespoke solutions. Such works are affordable for not only big production environments, but also SME's in the course of streamlining their everyday work.

For the Codel team every customer is a partner - from the first stages to scope project goals, through implementation to performance audit. We work closely with every customer and share our knowledge freely.

So if you are ready to gain control and reveal your hidden factory – contact us today!

PRODUCTION MANAGEMENT

Production orders drive ERP data distribution to each machine and the generation of bills of materials or product composition notes and related queries and signals to prevent stock out and stock purchase: lists the raw materials, sub-assemblies, intermediate assemblies, sub-components, parts, or tooling.

QUALITY ASSURANCE (EMBEDDED OR STAND-ALONE)

AIDA can connect to various Quality Control equipment to automatically gather data and make interventions in the production processes (including rejects, reworks, and remedy). All these actions are stored, and various reports are automatically generated.

STANDARDS COMPLIANCE AND TRACEABILITY

As a proprietary solution supporting many clients for many years, AIDA today ensures compliance to many standards, from TPD (EU Tobacco Product Directive) on a process level to GS1 re: marking. AIDA's custom Trace and Track solutions enable a fully connected, real-time supply chain. From the plant floor and warehouse operations right through to distribution it provides agility, traceability, and visibility of goods, people, assets and events. Whether the requirement is compliance with the latest traceability standards, to minimize inventory, manage supplier performance, or meet stringent just-in-time schedules.

VARIOUS TYPES OF ITEM LEVEL MARKING AND IDENTIFICATION

AIDA server-based marking and identification can be used with various marking and identification equipment. From Thermal Transfer and Direct Thermal Printers and applicators, CIJ (Continuous Ink Jet) Printers to Laser Marking machines and different identification barcode readers and cameras. Our Production Marking includes marking all relevant materials, parts, and products that are involved in the production process. Distribution Marking allows logistic marking and non-homogeneous package marking.
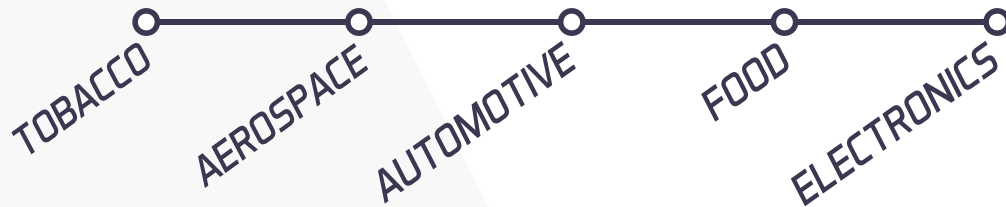
HORIZONTAL INTEGRATION

AIDA can be easily connected to various third party systems throughout supply and distribution chain to provide automatic EDI communication to improve throughput.

VERTICAL INTEGRATION

AIDA can easily create two-way communication with a wide range of production equipment. AIDA can collect data from machines for onward data exchange, as well as transmitting of processed data back to those same machines, to have full visibility of the processes and enable automatic real-time interventions. AIDA's expansive feature sets means it is aptly named as a Total Production Management suite. AIDA is a proprietary solution which, when connected to a Client's ERP system and production lines, reveals the hidden factory.

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YEARS OF EXPERIENCE
IN INDUSTRY

TOBACCO AEROSPACE AUTOMOTIVE FOOD ELECTRONICS

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