



TRACEABILITY FOR SMART FACTORY SOLUTIONS

TURNKEY
SOLUTIONS



TRACEABILITY

DATA BASE

1234567890

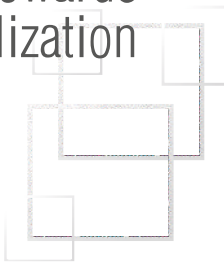
IOT READY

UCI

User Control Interface

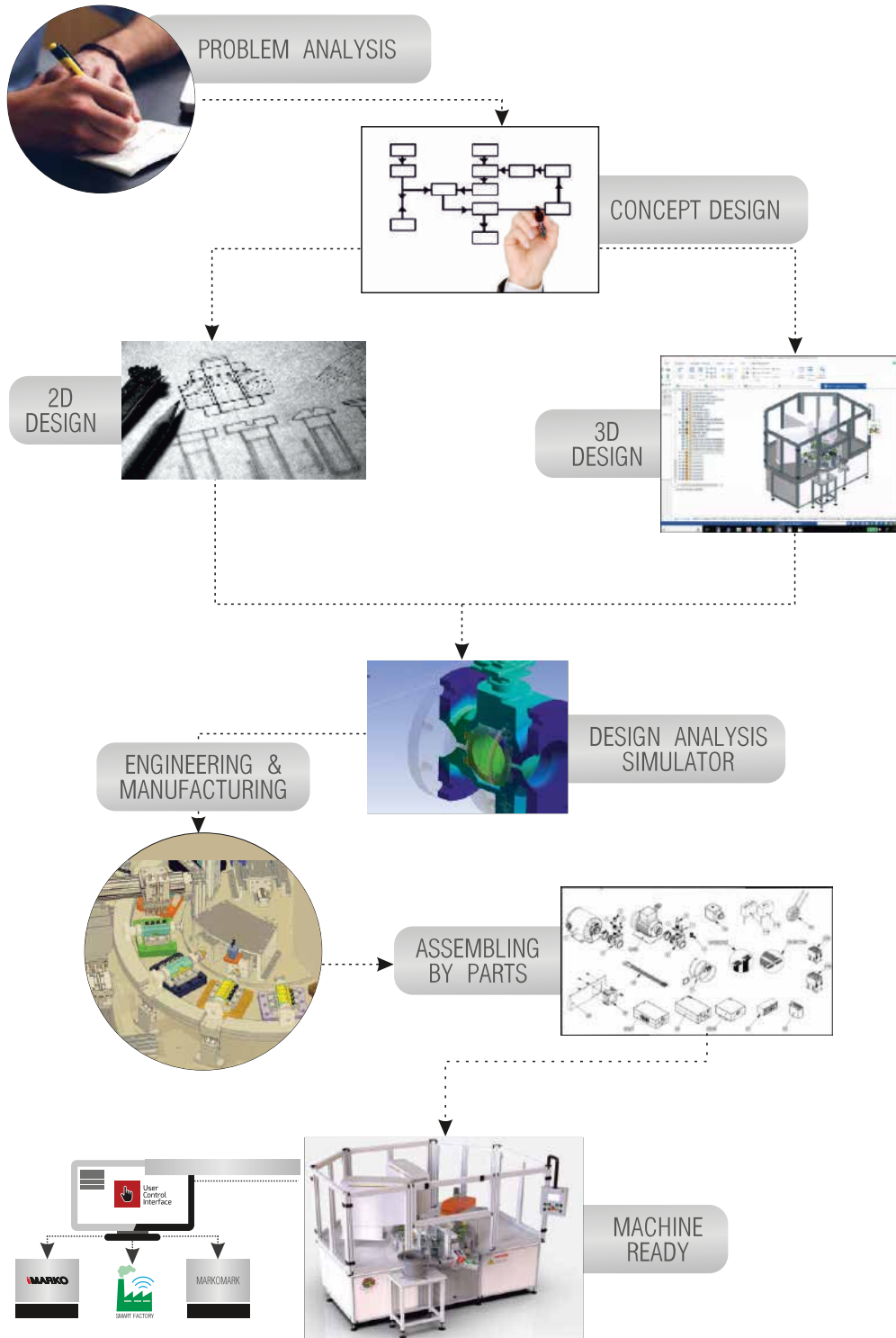


Moving towards
intelligent industrialization



CUSTOM MADE AUTOMATIONS-FROM DESIGN TO MANUFACTURING

for Marking, Printing, Traceability, Vision & Special applications including development of special user control & intelligent interface, ready for IIOT this helps in saving downtime, increasing efficiency, controlling rejects, reducing energy, improving machine health & preventive maintenance. Finally and most importantly networking with other machines in agile environment.



We do not " Reinvent the Wheel ", we use the best technologies from

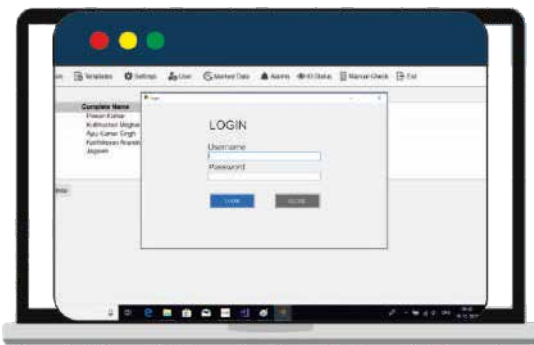
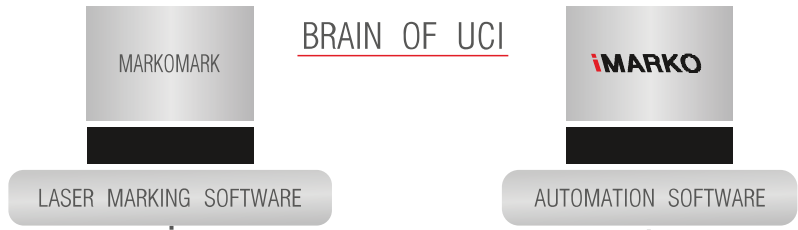
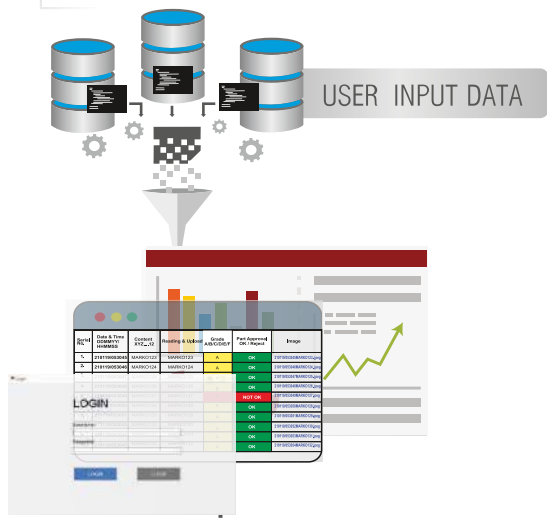


N.B. Markolaser reserves the right to change the design to upgrade the technology from time to time.

* Optional Items: Custom Made

Logos & Artworks Shown are Property of Respective Companies

FLEXIBLE USER CONTROL INTERFACE & IIOT READY CUSTOMIZED SOFTWARE



Administration level & Authenticity

Various access levels can be set for operators, hod plant heads, retailers, vendors, etc. Unique login can be made for added security for different levels of data to be accessed.



Traceability

Generating code and serializing the product, components, process, material & subparts across the hierarchical flow. Marking with laser (DPM) or RFID According to situation and condition helps in data collection and updation to the server database /cloud for all levels like lot no., unit id, date, time. etc.

Serial No.	Date & Time DDMMYY: HHMMSS	Content XYZ...12	Reading & Upload	Grade ABCDEF	Part Approval OK / Request	Image
1.	210119053045	MARKO121	MARKO123	A	OK	210119053045012.jpg
2.	210119053046	MARKO124	MARKO124	A	OK	210119053046013.jpg
3.	210119053047	MARKO125	MARKO125	A	OK	210119053047014.jpg
4.	210119053048	MARKO126	MARKO126	B	OK	210119053048015.jpg
5.	210119053049	MARKO127	MARKO127	B	NOT OK	210119053049016.jpg
6.	210119053050	MARKO128	MARKO128	A	OK	210119053050017.jpg
7.	210119053051	MARKO129	MARKO129	A	OK	210119053051018.jpg
8.	210119053045	MARKO130	MARKO130	A	OK	210119053045019.jpg
9.	210119053046	MARKO131	MARKO131	A	OK	210119053046020.jpg
10.	210119053046	MARKO132	MARKO132	A	OK	210119053046021.jpg

Quality Inspection

The quality of unique code marked can be scanned and the grade can be updated to the server if laser marking is done. Managing and tracking the equipment and tools for inspection and the collected data can be integrated to the cloud.

Sensor Control Interface

Sensor Control Portal gives us a facility to monitor the parameters that we need to activate so that we can get an alarm if there is any emergency.



CUSTOM MADE TRACEABILITY SOLUTIONS



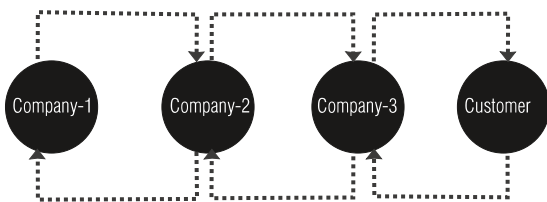
In recent times, many industries have implemented traceability in their factories for optimizing their supply chain. We at MARKOLASER provide complete solutions, including tracing & tracking of component from start to end in the supply chain (Part Genealogy).



Disclaimer: These images are for illustration purposes only, the machine look may vary in real time

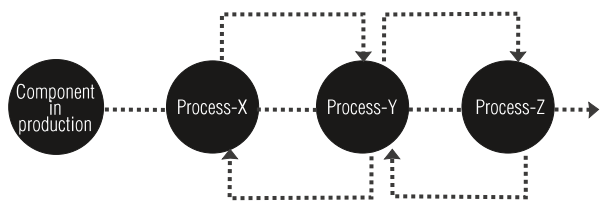
TYPES OF TRACEABILITY

Traceability means the ability to trace. There are many ways to understand the concept of traceability, so we can classify them as field traceability and indoor traceability. Field traceability means examining and monitoring the flow of component among all the companies and then to customer. Whereas indoor traceability means monitoring the manufacturing process within a company. The marking of 2D code helps in adding very important data in very less space.



FIELD TRACEABILITY

It is a type of traceability in which customer can monitor the complete process from source to where it is shipped.

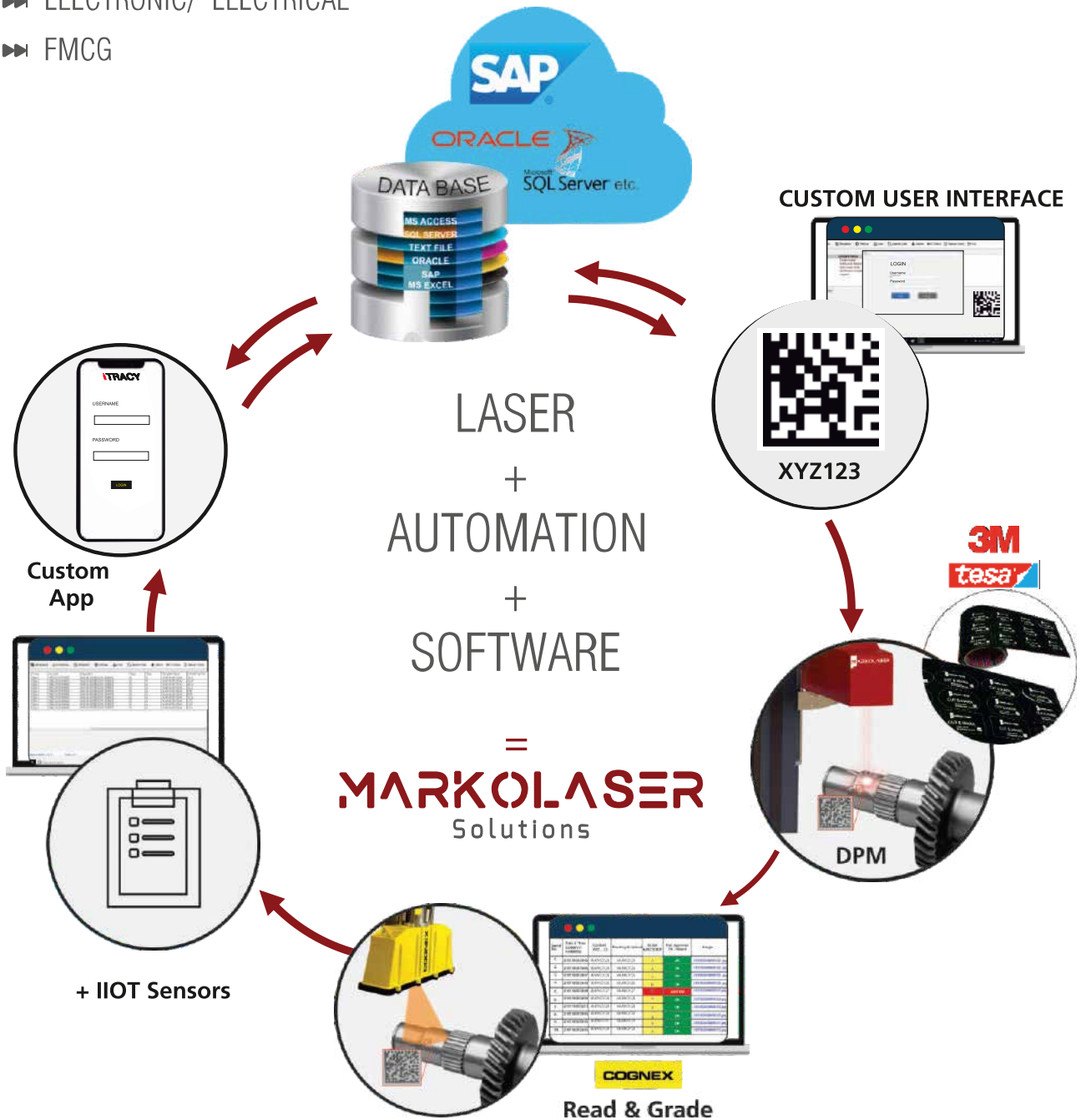


INDOOR TRACEABILITY

It is a type of traceability in which all the manufacturing processes can be monitored within the manufacturing unit.

TRACEABILITY SOLUTIONS

- ▶▶ MEDICAL
- ▶▶ AERONAUTICAL
- ▶▶ AUTOMOTIVE
- ▶▶ ELECTRONIC/ ELECTRICAL
- ▶▶ FMCG



We Follow DPM & Label Code Quality Standards

ISO/IEC	ISO/IEC	ISO/IEC	ISO/IEC	DOD	SAE	FDA	FDA
TR 29158	TR 24720	16022	15415	UID	AS9132	GS1	CFR21



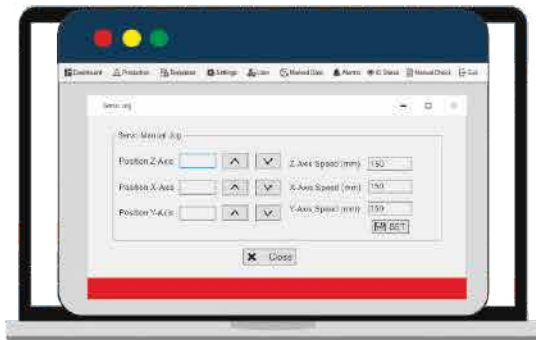
Analysis

Intelligent sensor in combination with marko-controller and iTRACY makes it possible to collect and monitor the data of component and machine or systems in real time. Example like temperature, power and vibration.

With the analyzed data we will be able to correct the error and help in reducing the consumption of energy due to fault occurred in the system.

Vision System Integration

Vision Inspection Portal helps in Integration of vision system for vision measurement and color etc. To identify any type of flaw for right inspection and segregation, the integrated vision system helps in easy analysis of production performance.



Automation Operation

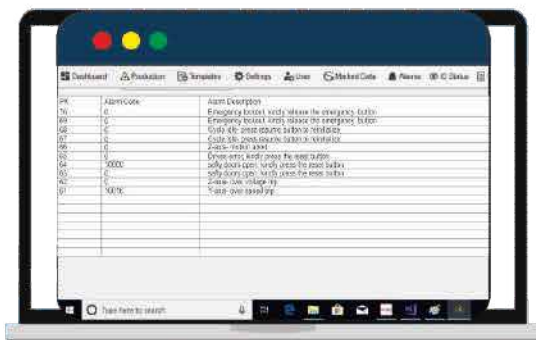
Automation portal provide us a caear visualization for automation.

For better automation the value of x,y,z axis can be set manually.

The integrated sensor help in adjusting x,y,z values of moving parts.

Flexible Customizable Portal

We provide our client the flexibility and an open platform where any amount of data can be updated against the unique code and can be managed. The data can be later updated to the server/database/cloud.

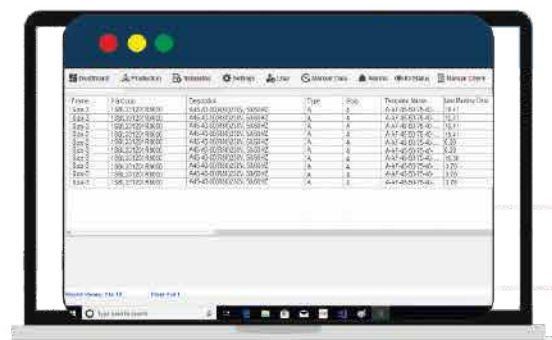


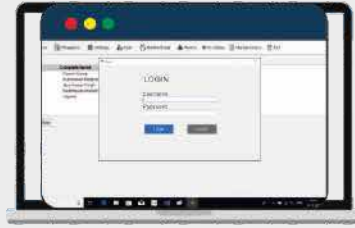
Alarm/Event Management

The custom command can be set according to the requirement related to production for example, Threshold can be set according to quality of marking, production outputs, alert can be auto sent via email & sms.

Report Generation

The system provides us the ability to generate reports which contains all the critical data. The data is further used for analysis of all the different processes and the conditions.





Integration with ERP/Cloud/Database server

iTracy Cloud Connector gives the capability of getting connected with any server/database of our clients which makes it a unique platform regardless of location or devices. This reduces installation efforts & increases flexibility. The multiple user accessibility and authentication feature makes it most secure and flexible to use & process the task.

STEP-1



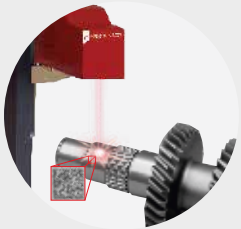
CODE GENERATION



Code Generation

The unique code is generated and marked on the RFID chip is assigned with unique code, against which the data can be updated and managed.

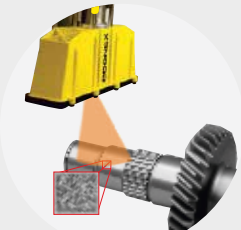
STEP-2



Laser Marking/ Label Marking

Laser marking is done with all compliance so that it can be scanned with any industrial scanner, even in harsh environment and conditions.

STEP-3



Reading

Production log helps to identify the component and trace the data, the grade of 2D data, rejected part in the production processes and the uploaded images of the 2D code. It also has a built-in analytical tool for quick analysis.

STEP-4



Report Generations

The system provides us the ability to generate reports which contains all the critical data. The data is further used for analysis of all the different processes and the conditions.

STEP-5




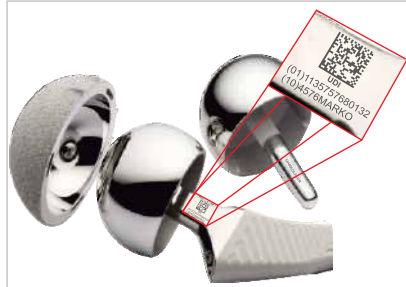
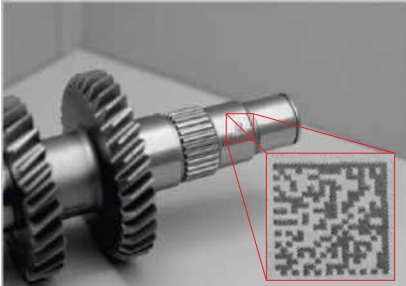

Mobile App for Client

The developed application has various access levels like retailer, vendor, and customer, etc. Unique login id can also be made for added security.

STEP-6

EXAMPLES OF TRACEABILITY

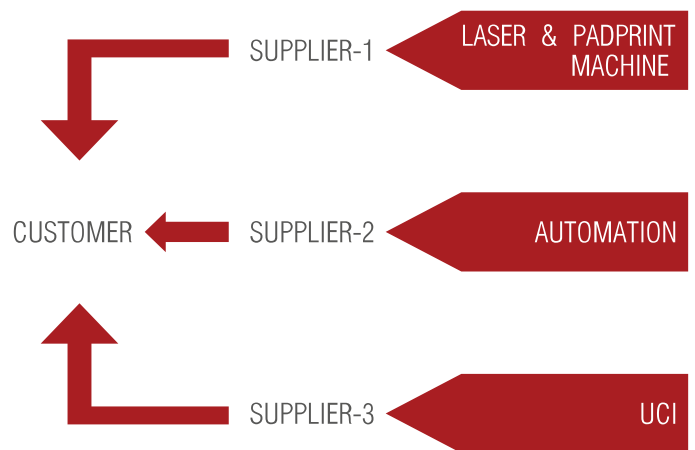
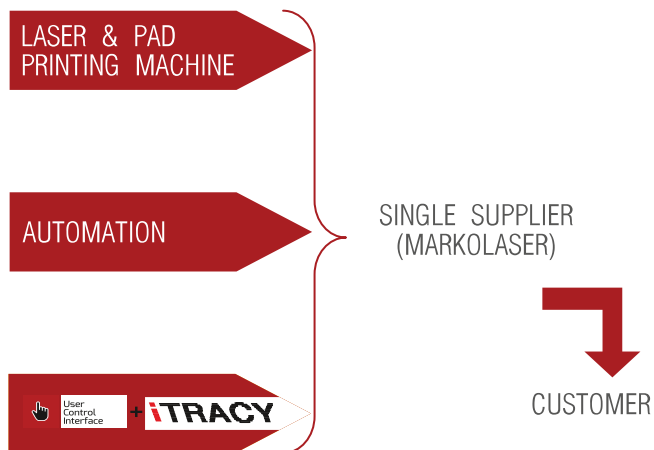
GOALS

Decrease in product recalls	Improved brand reputation	Optimizes supply chain	Eliminates theft & counterfeiting	Reduce warranty claim costs & saves money
				
Medical instrument	UDI Marking on medical part	Medical implants		
				
Engine component	DPM on tools	Electrical component (Connector)		

All Solutions at one place

SPINKS WORLD (SMART FACTORY SOLUTION)

OTHERS



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N.B. Markolaser reserves the right to change the design to upgrade the technology from time to time.
* Optional Items: Custom Made

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