\ ONA SMART SERVICES

Smart Productivity

Smart Connectivity

Smart Consultancy

Smart Care

\ People   \ Technology   \ Profitability

ONA \WE ARE EDM

\ ONA SMART SERVICES

The product upgrades, the digital solutions and the support you and your project were waiting for.
Anytime and anywhere in the world.
Trust in ONA and make an smart choice.

\ SMART PRODUCTIVITY

Smart Track

Smart Security

Smart Manufacturing Data Access

Smart Automation

Smart Control & Supervision

Smart Communication

Smart Programming

Smart Software

\ SMART CONNECTIVITY

Smart Connect

Teleservice

Remote Assistance

Telephone & E-mail support

\ SMART CONSULTANCY

ONA Academy

Business Support

Applied Engineering

\ SMART CARE

ONA Health-Check

Machine Retrofitting

ONA Market

\ SMART PRODUCTIVITY

It is not about producing, but about being productive.

We offer a wide range of digital services and software solutions to increase the performance and productivity of your machine; improvements in terms of traceability, supervision, access, programming etc.

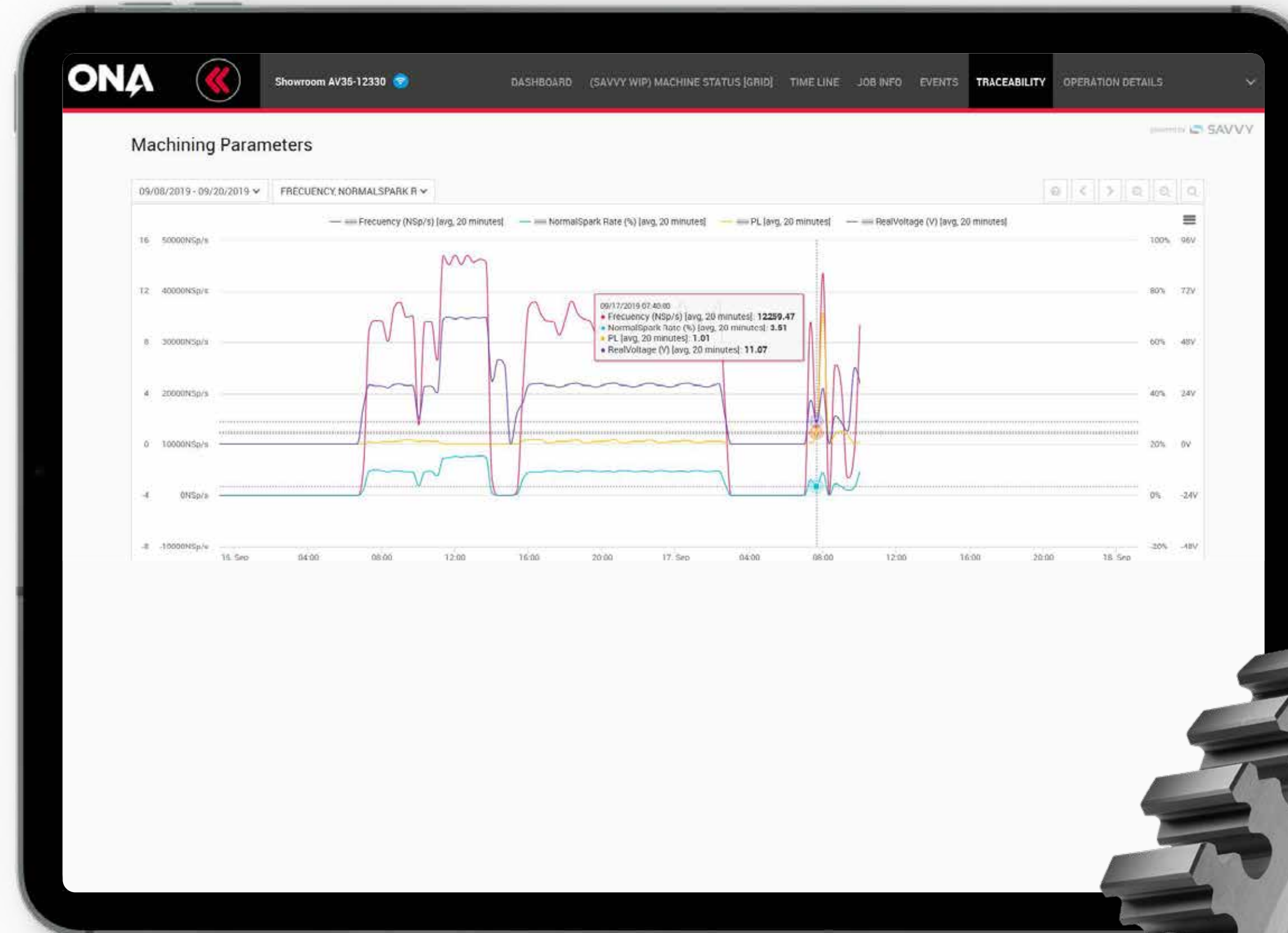*We make your machine smarter, and therefore, more productive!*

SMART TRACK

PART FINGERPRINT

The smart track CNC functionality generates an Automatic report for every part, containing real time WEDM process information. A set of main parameters influencing the process have been selected in order to qualify the part. The trace and history files generated by the CNC can be included as valuable manufacturing data for the quality process control of the customer and opens the door to advanced data analytics of insights discovering of the WEDM process.

The collected manufacturing data identify the behavior of the machine when manufacturing a component and defines a signature part that is behind the traceability concept.
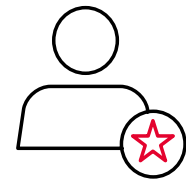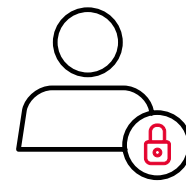
SMART SECURITY

SECURITY PACK

Usually, the users of the machines want to have as much control on the machine as possible. Therefore, they want to be able to copy programs, either with a pen drive or via network, modify them, create new technologies, change settings parameters… without any restrictions. However, there are sometimes in which the customer wants to segregate the work and to be sure that critical files will not be changed in the machine. He may also want to create or modify some files in the machine and not allow the operator to change them in order to avoid human mistakes.

Thus, some limitations must be added to the machine in order to guarantee that the final user of the machine does not have full access to it. This goal is achieved with the Security Pack. The Security Pack creates two levels of user: restricted user and supervisor user.

The Supervisor User
has complete control on the machine. It has the same accessibility as the user of the machines without the Security Pack. This user can also decide which limitations will be applied to the restricted user.

The Restricted User
has its control on the machine limited by the supervisor. He can have some restrictions in the creation and modification of files and tables, the access to the pen drive, the modification of the settings parameters, work area, e-mail settings, Plant Monitor access and change of the execution modifiers, as well as the transfer of files via serial line. The restricted user cannot install new versions.

SMART MANUFACTURING DATA ACCESS

OPC UA is the de facto machine tool standard interface for the secure connection of machines in order to exchange manufacturing data information between diverse platforms from multiple vendors and to allow seamless integration of those platforms.

SMART
AUTOMATION

EROWA AUTOMATION KIT

Hardware and CNC software systems for interfacing EROWA ATC (Automatic Tool Changer) systems.
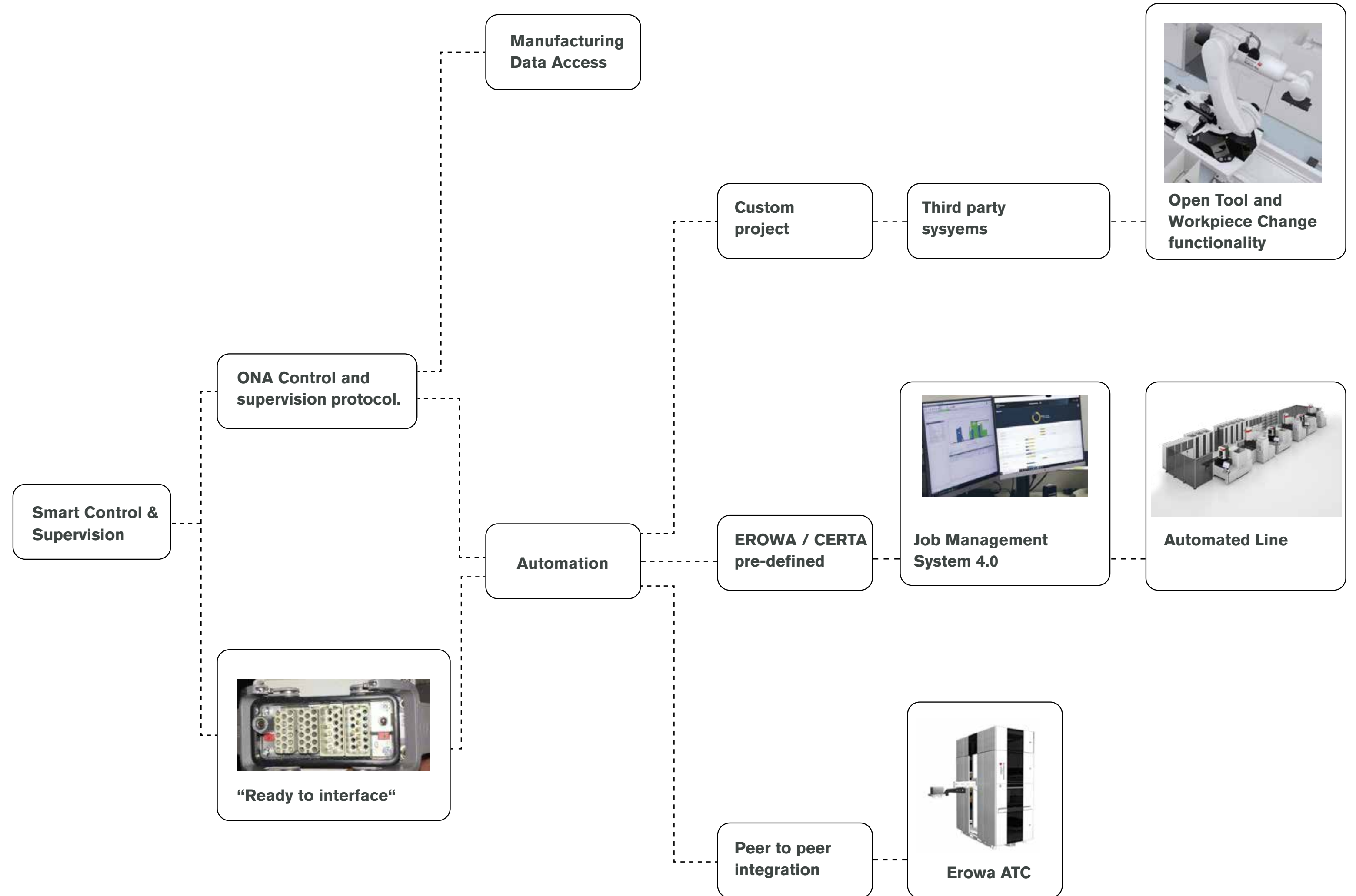

For other systems, a turnkey solution, support and training can be provided.

SMART CONTROL AND SUPERVISION

CONTROL AND SUPERVISION PROTOCOL

The control and supervision protocol allows third party software developers to easily integrate the ONA machines into their workshop, and make them collaborate with other robots, magazines and automation systems. The control and supervision protocol is an open solution based in XML formatted messages. It defines a communication between the machine and the PC, both connected to the same LAN. Currently, this interface is used for interfacing ONA machines with third party systems in Automation projects and for its integration in advanced manufacturing systems (MES, cell controllers, ...) like the Job Management System by EROWA/CERTA. This interface is also the way to connect ONA machines to the ONA Smart Connect platform using the ONA Smart box.

Manufacturing Data Access

Custom project

Third party sysyems

Open Tool and Workpiece Change functionality

ONA Control and supervision protocol.

Smart Control & Supervision

Automation

EROWA / CERTA pre-defined

Job Management System 4.0

Automated Line

"Ready to interface"
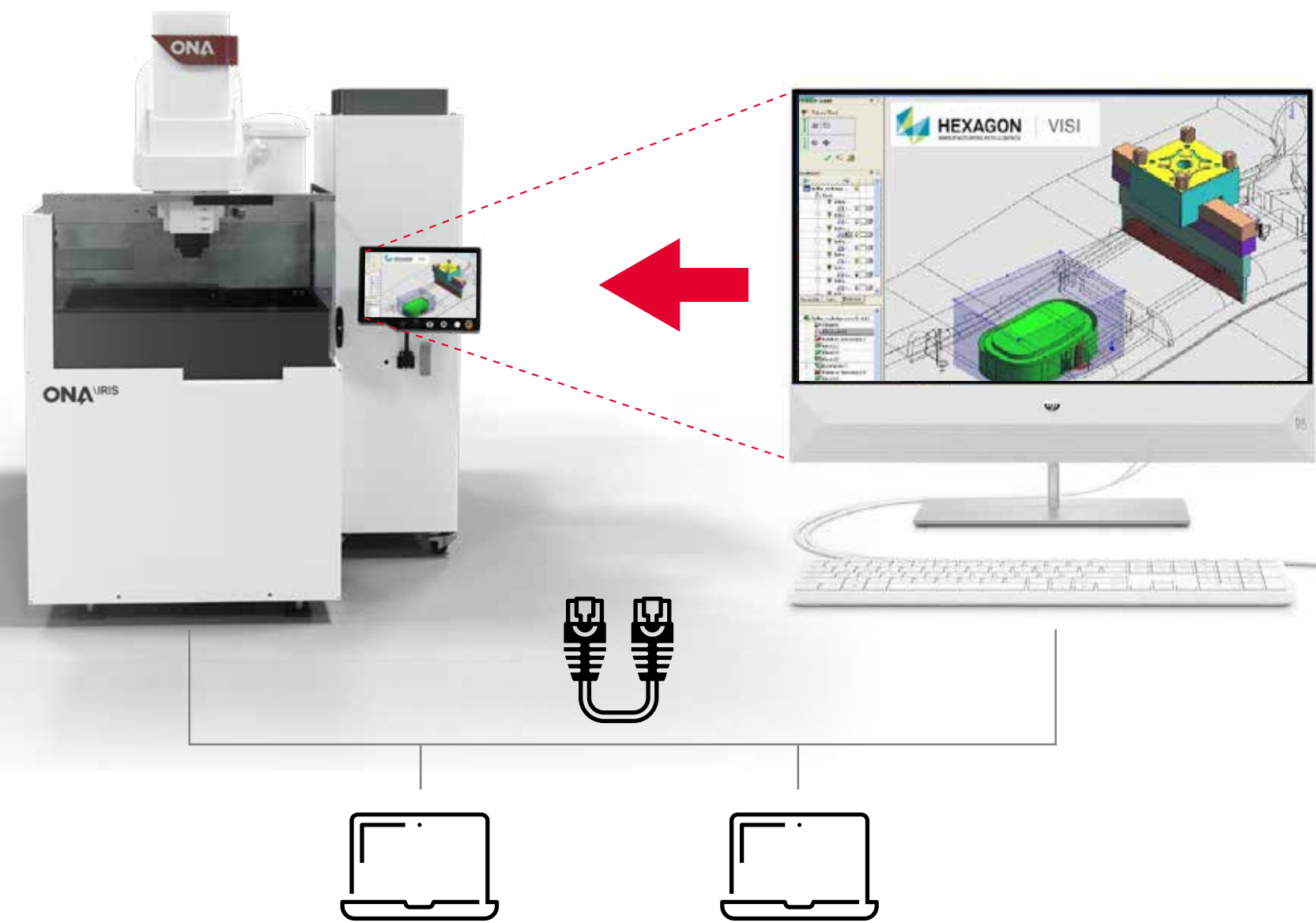
Peer to peer integration

Erowa ATC

SMART
COMMUNICATION

DESKTOP VIEWER

Desktop Viewer is a CNC feature that allows remote access to all software on a networked PC from the CNC; CADCAM software, office applications.

Desktop Viewer

MAIL SENDER

Mail Sender is a CNC feature that allows automatic mail sending on defined events .
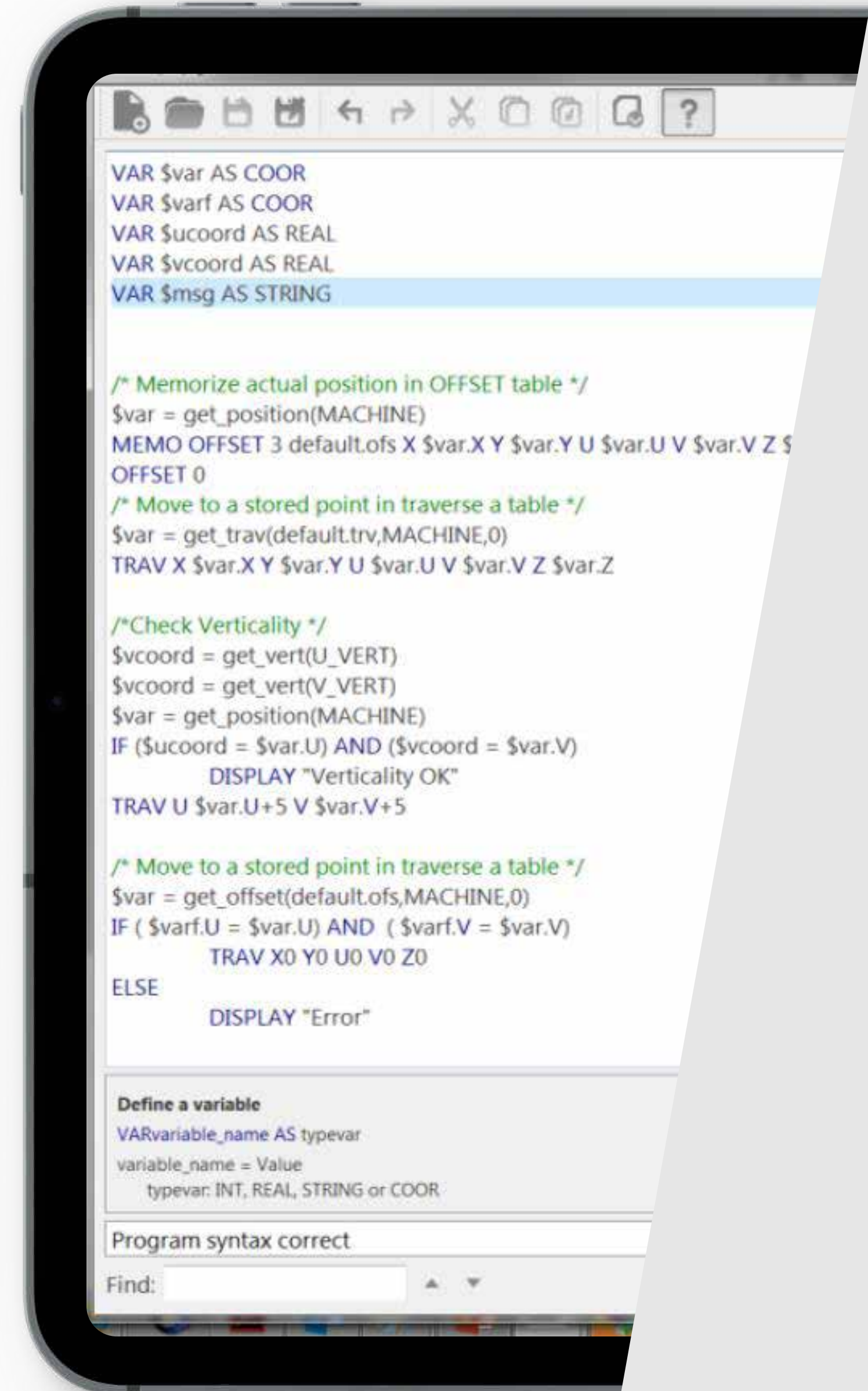
SMART PROGRAMMING

SCRIPT PROGRAMMING

Script Programming is a high level manufacturing programing language that let you to convert your application knowledge and expertise in dynamic programs able to tackle with variables, rules and changing conditions.

The Adaptive machining concept involves the capabilities to react to changing conditions. As much knowledge you have about your manufacturing process more competitive you become. Valuable Technical Knowledge of your EDM operators and experts is usually expressed as rules to be applied over input and output parameters. Pre-inspection process and Set up procedures involve probing to capture the references of the

parts and/or electrodes. May be the operator should be asked to input a data or a confirmation in a dialog box before launching a job. During the machining some in-process calculations can elaborate key performance parameters that probably you want to register, track and trace for quality purposes. Probably you want to have a custom report of the job and a history or log machine file. All of this is not possible with conventional programming, that is suitable for static pre-planned procedures when changes are not expected.
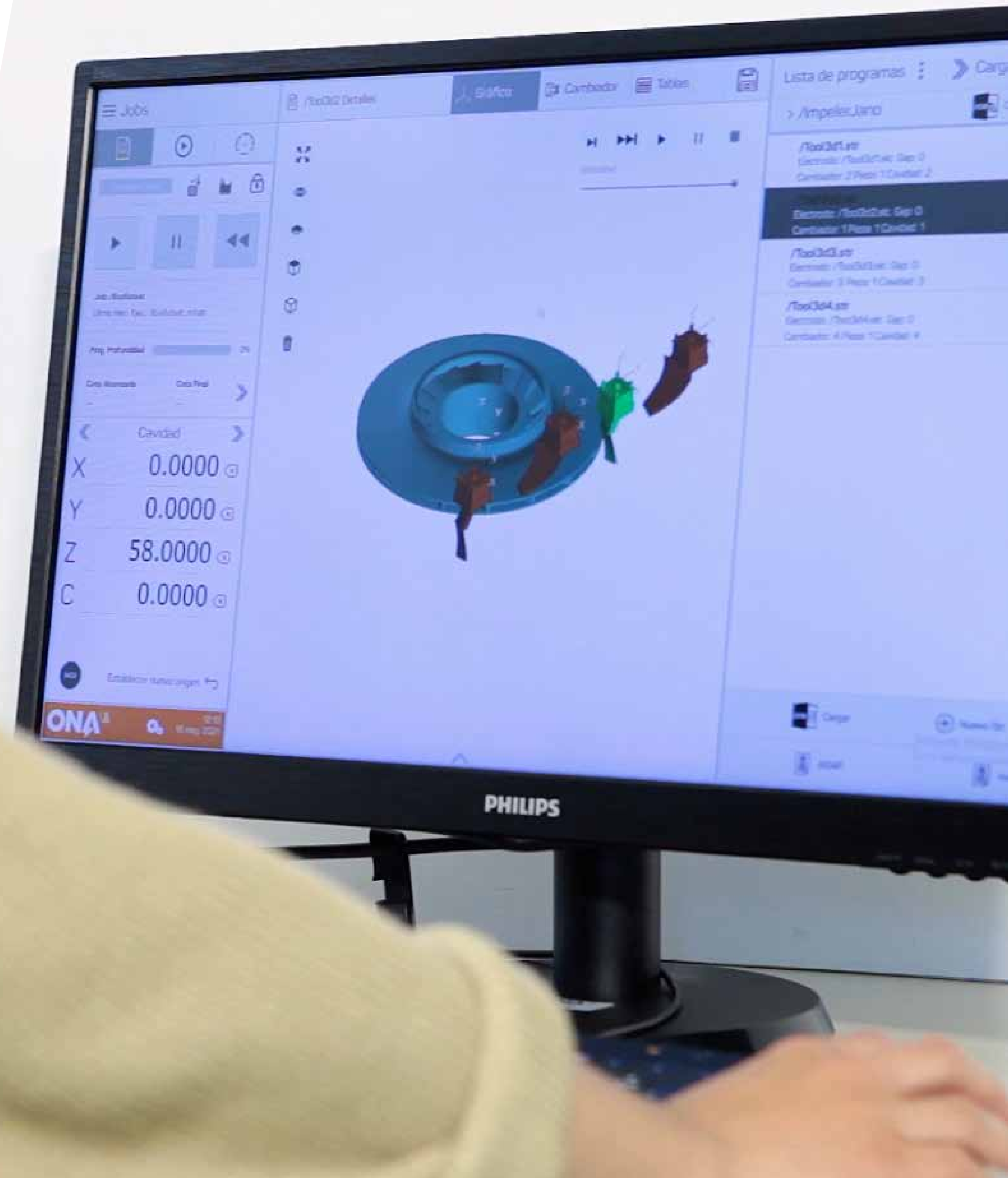
The possibilities with Script Programming are endless.

```
VAR $var AS COOR
VAR $varf AS COOR
VAR $ucoord AS REAL
VAR $vcoord AS REAL
VAR $msg AS STRING


/* Memorize actual position in OFFSET table */
$var = get_position(MACHINE)
MEMO OFFSET 3 default.ofs X $var.X Y $var.Y U $var.U V $var.V Z $
OFFSET 0
/* Move to a stored point in traverse a table */
$var = get_trav(default.trv,MACHINE,0)
TRAV X $var.X Y $var.Y U $var.U V $var.V Z $var.Z

/*Check Verticality */
$vcoord = get_vert(U_VERT)
$vcoord = get_vert(V_VERT)
$var = get_position(MACHINE)
IF ($ucoord = $var.U) AND ($vcoord = $var.V)
        DISPLAY "Verticality OK"
TRAV U $var.U+5 V $var.V+5

/* Move to a stored point in traverse a table */
$var = get_offset(default.ofs,MACHINE,0)
IF ( $varf.U = $var.U) AND ( $varf.V = $var.V)
        TRAV X0 Y0 U0 V0 Z0
ELSE
        DISPLAY "Error"
```

Define a variable
VARvariable_name AS typevar
variable_name = Value
    typevar: INT, REAL, STRING or COOR

Program syntax correct

Find:

SMART
SOFTWARE

SMART
DESKTOP

Smart Desktop is an optional
Microsoft Windows based ONA
software product for CNC simulation
in desktop computers. It also
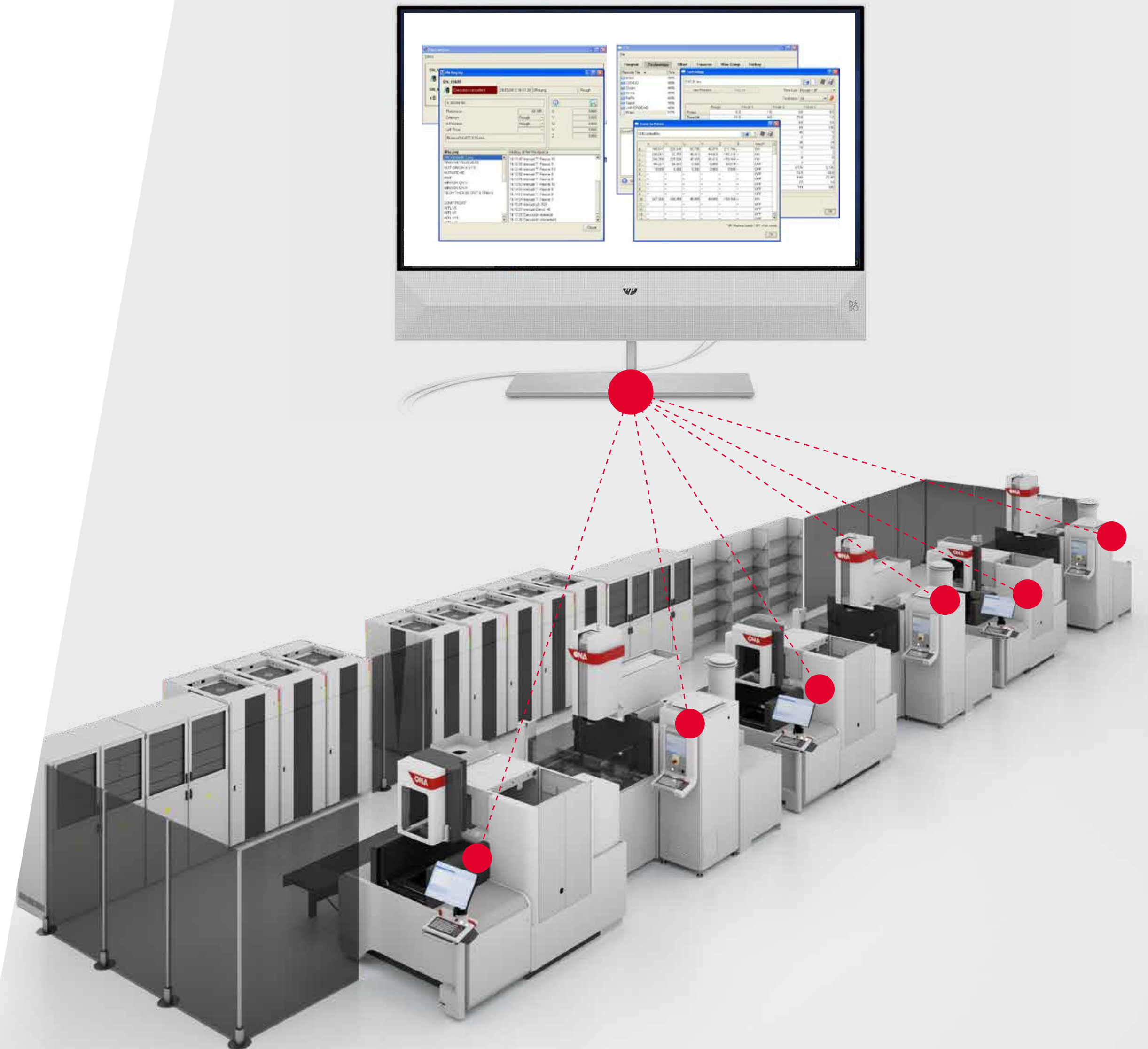enables Offline CNC training and
programming.

SMART
SOFTWARE

PLANT
MONITOR

The Plant Monitor is an optional Microsoft Windows based ONA software for monitoring a set of ONA machines in LAN environments.

The Plant Monitor application takes advantage of many of the ONA CNC services and protocols in order to monitor the work of the machines and to allow FTP file transfers in a LAN environment. This tool helps in the of offline programming process and can be used to install CNC software updates a well. It may even be used to remotely display the user interface of the machine. With the appropiate networking infratructure (not provided) the features of the Plant Monitor can be remotely avaialble outside the LAN of the workshop.

\ SMART CONNECTIVITY

\ SMART CONSULTANCY
\ SMART CARE

Say yes to connectivity but on a smart way. Take advantage of data storing in the cloud and secure a nonstop performance thanks to our remote assistance service.
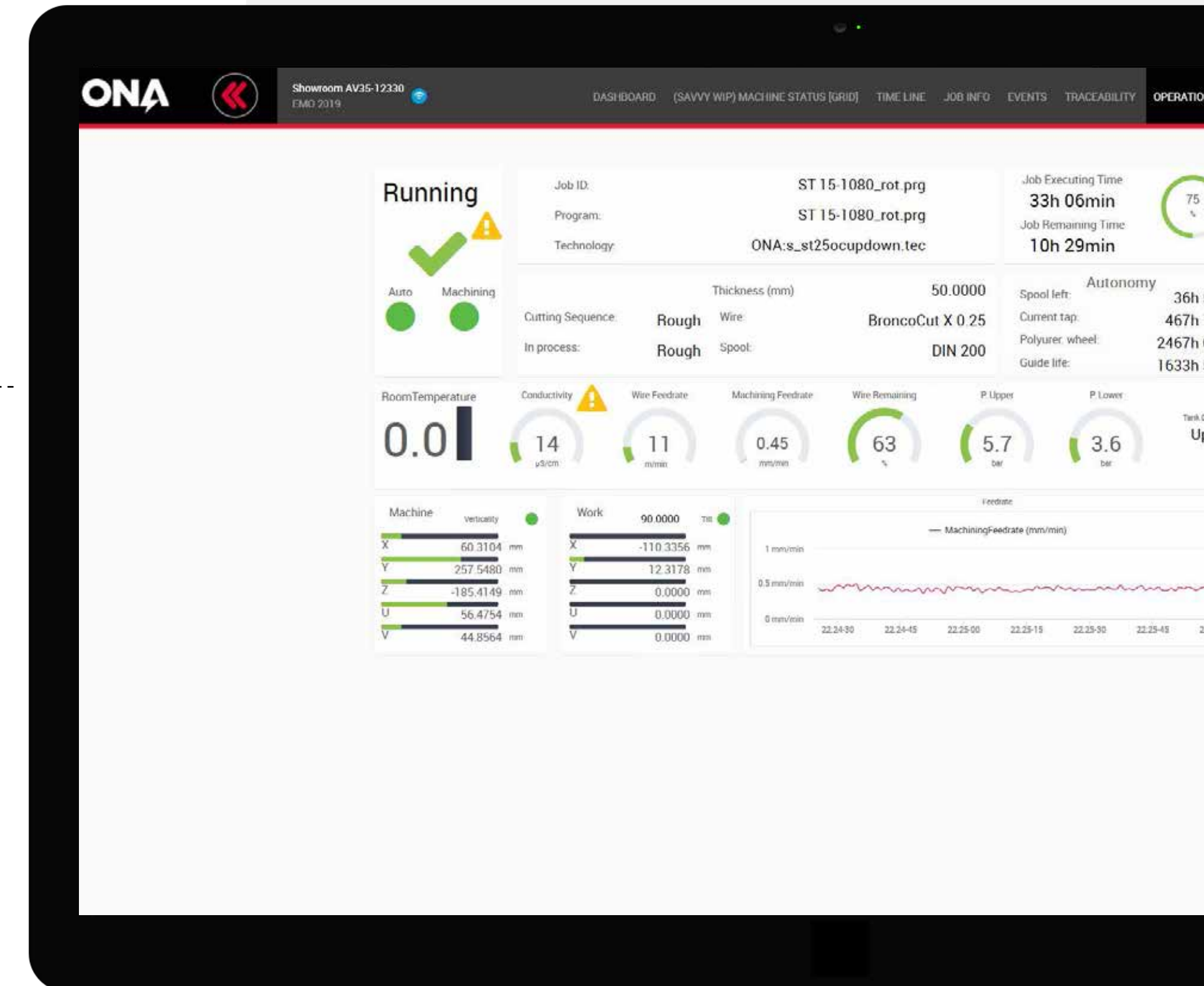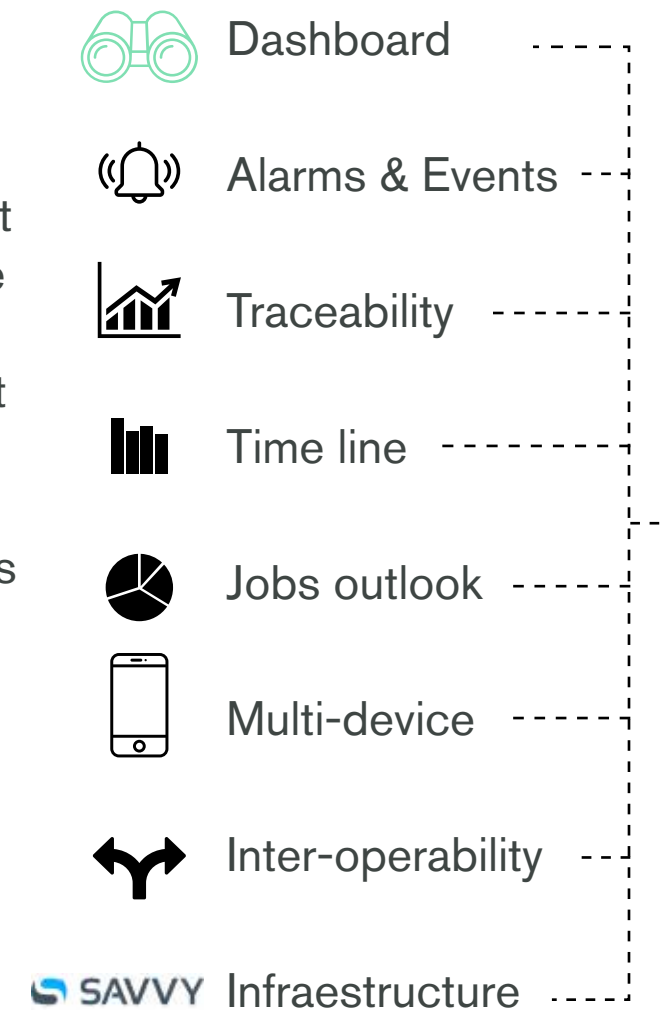
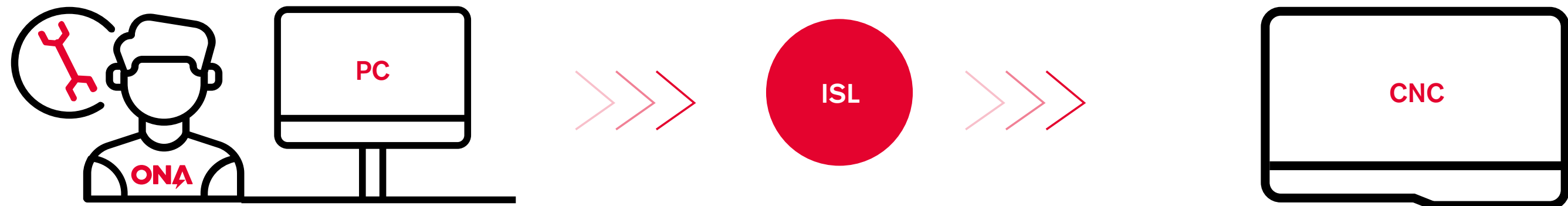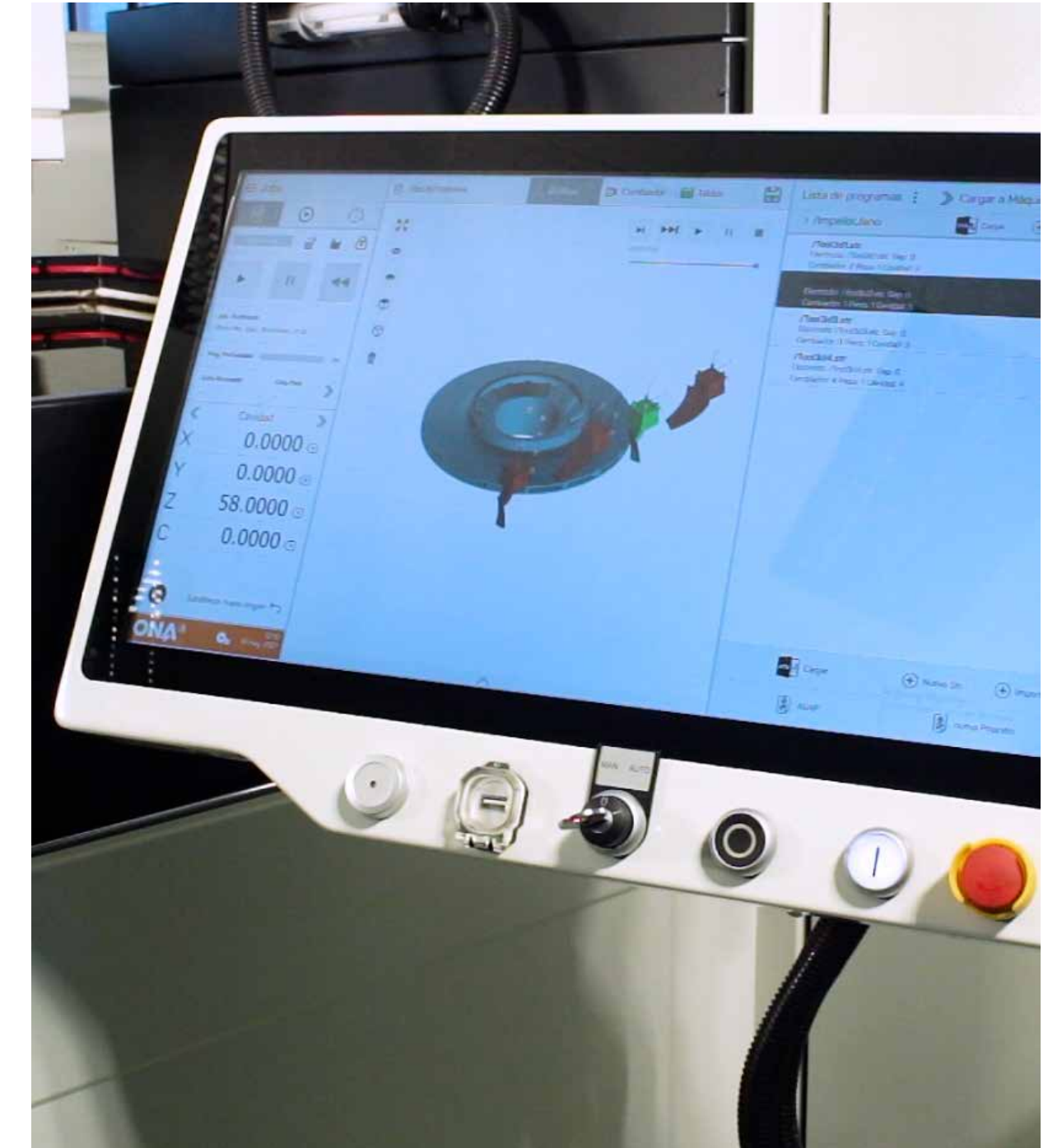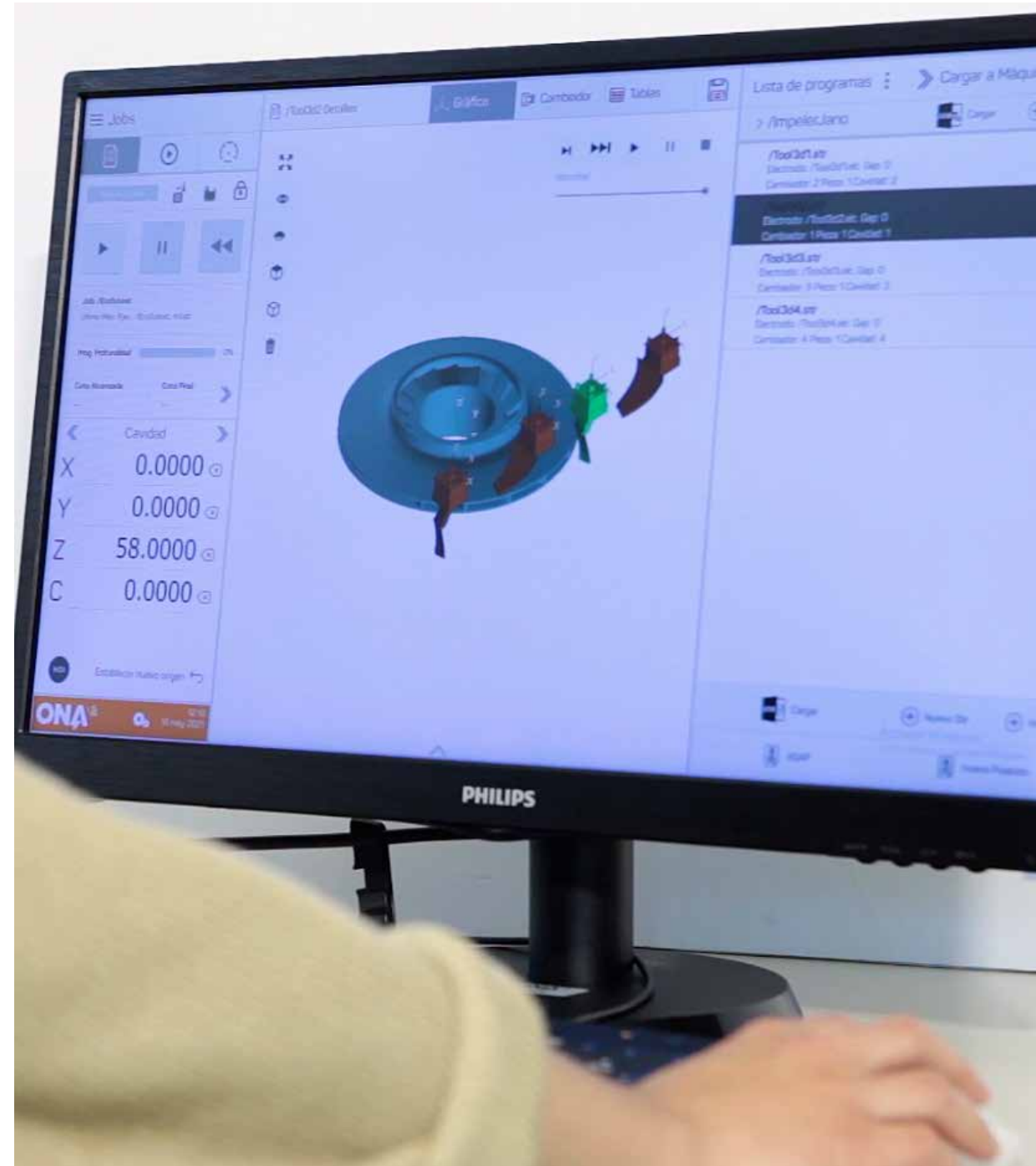*It's time to connect your machine to the world.*

SMART
CONNECT

ONA is a leading manufacturer of EDM machines (Electrical Discharge Machining), highly specialized in large, custom and automated EDM installations. As some of the most disruptive improvements and changes in Machine Tool industry are expected to come from the digitalization paradigm, currently ONA is focusing on the research of advanced services for connected machines. A cloud platform for monitoring services is being deployed with the aim of improving ONA customer´s processes and the performance of ONA products and services This is the rationale of ONA Smart Connect.

The collected manufacturing data identify the behavior of the machine when manufacturing a component and defines a part signature concept that is behind the traceability service in ONA Smart Connect cloud infrastructure. In this way, the impact of changes in critical parameters (like environment temperature, material and geometry, EDM process conditions and machine health) could be analyzed with a more holistic perspective for the actual manufacturing process.

Dashboard

Alarms & Events

Traceability

Time line

Jobs outlook

Multi-device

Inter-operability
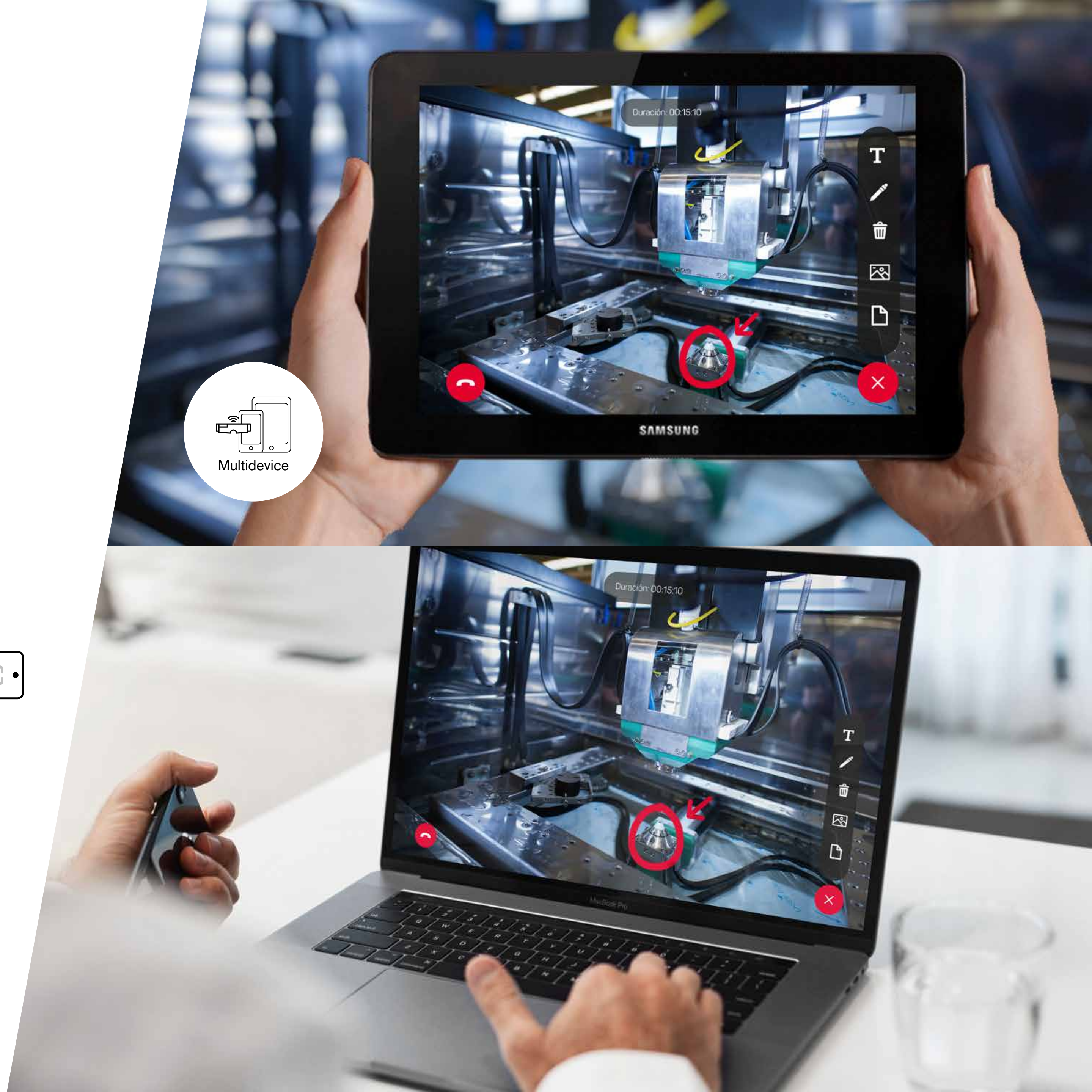
SAVVY Infraestructure

TELESERVICE

Remote access to the machine
CNC in real time through the ISL
online tool. We will get a live display
of your machine control in order to
solve problems immediately. The ISL
Online tool is a software that meets
strict security requirements.

PC

ISL

CNC

REMOTE ASSISTANCE

Through a collaborative tool based on augmented reality we will provide real-time remote technical assistance to help you diagnose the problem and guide you in the resolution of the incidents in your machine.

MASTER   TECHNICIAN

Multidevice

TELEPHONE
& E-MAIL SUPPORT

At ONA, we are committed to
developing our own machines,
CNC, generator and technology
included. Our team of experts
ensure that we are able to manage
our clients' demands directly. Our
highly qualified staff will provide you
fast and effective response to any
problem by email or telephone.

	AV	QX/IRIS	AD	
Security Pack	x	x		ONA Smart CNC
Part Fingerprint	x			ONA Smart CNC
Script programming	x	x		ONA Smart CNC
Control and Supervision/Automation	x	x	x	ONA Smart CNC
Erowa Automation kit		x		ONA Smart CNC
OPC UA	x	x		ONA Smart CNC
Desktop viewer	x	x		ONA Smart CNC
Mail sender	x	x		ONA Smart CNC
Smart Desktop (CNC Simulator)	x	x		Desktop software
Plan Monitor	x	x	x	Desktop software
ONA Smart Connect	x	x		Digital Services
Teleservice	x	x		Digital Services
Remote Assistance	x	x	x	Digital Services

\ SMART CONSULTANCY

\ SMART CARE

The piece that changes everything. Our experience and knowledge acquired over 65 years, at the service of your project, to understand it, advise you, ensure its success and of course, train you in the use of our products, to make sure that you get the best return on your investment .

65 years of expertise turned into the best counseling.

ONA
ACADEMY

Knowledge in EDM processes makes the difference comparing to competitors. At ONA we are willing to share our knowledge with our clients. Therefore we offer general or customized training courses designed by our expert team, held in our Excelence Center or in your facilities.

\THE FUNDAMENTALS OF EDM

\OPERATION OF THE ONA MACHINE

▪ **Operation**

  ▪ Basic. Handling the machine.

  ▪ Advanced. CNC programming, technological options, pieces, processes, script programming.

▪ **Maintenance**

  ▪ Level I. Basic training and maintenance.

  ▪ Level II. Repairs.

BUSINESS SUPPORT

We are expert advisors in complete solutions in the field of erosion and we put our knowledge at the disposal of your new projects covering all aspects of your business.

- Process optimisation.

- Development of workpieces.

- Detailed study of the application manufacturing process.

- Study of machine design.

- Development of personalised technology.

- Nadcap certification.

- Documentation.

APPLIED
ENGINEERING

We place the knowledge and experience of our team of experts to optimise the different key parameters of the manufacturing processes. We work together with the client to develop alternative work flows to help make the most of each application; shorter processing times, cost reductions, surface quality improvement...

\ SMART CARE

Intelligent assistance because we are where you need and when you need it. Because we check your machine to prevent future failures. Because we have the spare you need at the price you need. And because we are able to update your machines and ensure its long-term profitability.

We like taking care of everything you care about.

ONA
HEALTH-CHECK

Our approach in maintenance: avoid the appearance of problems and consequently increase the availability of the machine.

We offer a preventive maintenance service and a subsequent report indicating the possible improvements that will optimize the performance of your machine.

As optional services we offer: geometric verification, laser calibration and levelling of the machine.

MACHINE RETROFITTING

Keep your machine updated. We offer software and CNC updates, generator upgrade, repair/ replacement of components (ballscrews, bearings, ...).

ONA
MARKET

Approved consumables and top-quality original replacements delivered in 24 hours thanks to our wide network of distributors around the world.

ONA Electroerosión, S.A. - Durango - (Spain)
Headquarters

Addilan Fabricación Aditiva, S.L. (Spain)
ONA Group company

ONA Electro-erosion, S.A.R.L. (France)
ONA Group company

ONA Electro-erosion, S.A. (Germany)
ONA Group company

AA EDM Corp. (USA)
ONA Group company

ONA EDM USA Corp. (USA)
ONA Group company

ONA EDM Machine Tool
(Shenzhen) Co. Ltd.(China)
ONA Group company

ONA Electroerosión (Russia)
ONA Group company

ONA Elettroerosione, S.R.L. (Italy)
ONA Group company

ONA Electro-erosion, LDA. (Portugal)
ONA Group company

\ ONA SMART SERVICES

ONA

\ People
\ Technology
\ Profitability

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