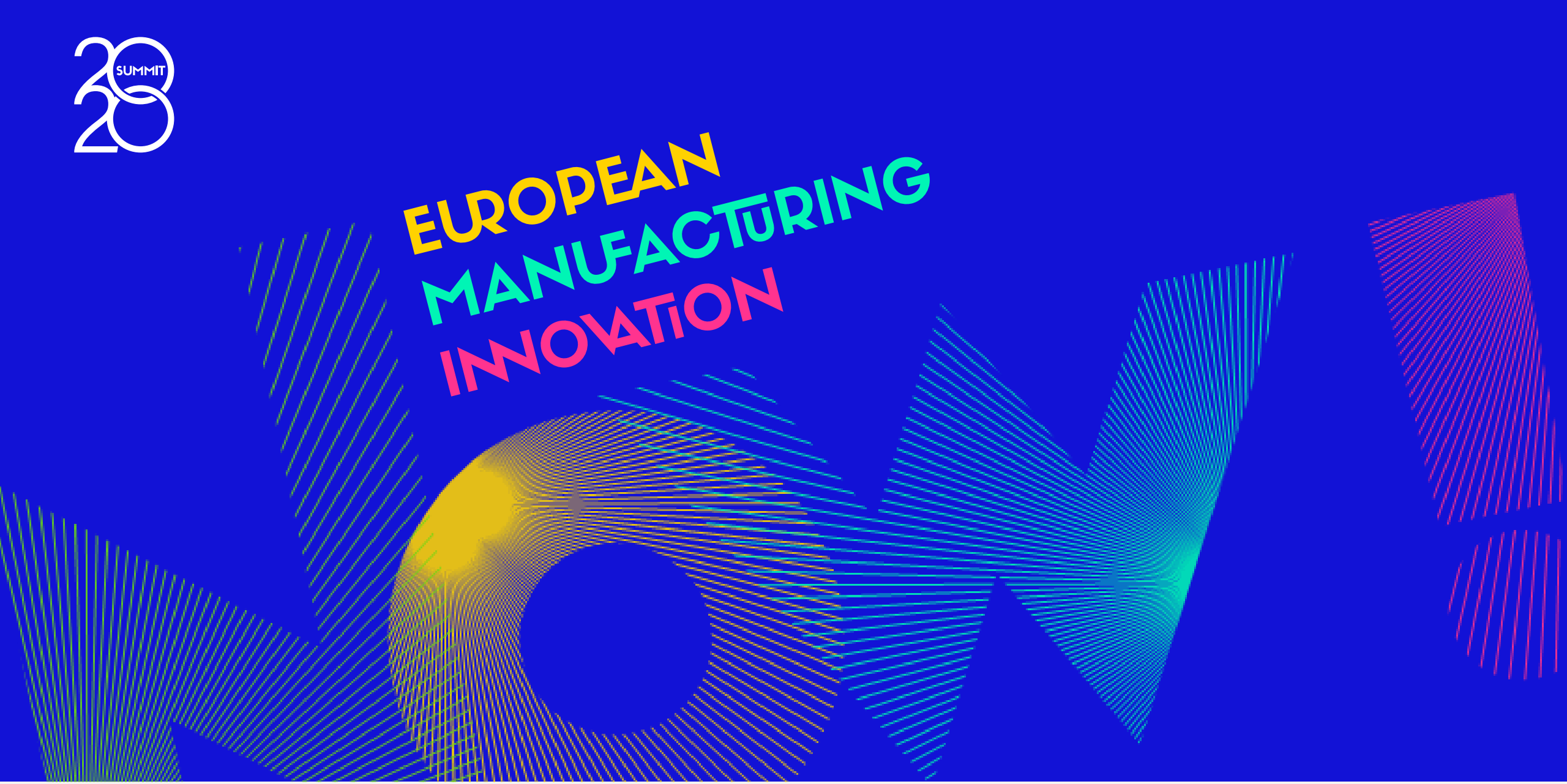

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RUBIC

Hybrid production systems based on safe human-robot interactive cooperation

Innovation Activity

EUROPEAN MANUFACTURING INNOVATION

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1

MANUFACTURING CHALLENGES

Automation and digital transformation of existing manufacturing processes.

Quality assessment operations require high repeatability, accuracy and precision.

2

SOCIETAL CHALLENGE

Quality assessment operations are performed manually – Hard to automate.

They are non-ergonomic operations leading to many errors and causing injuries to the operators.

3

PROJECT OBJECTIVE

RUBIC aspires to implement a hybrid working cell in order to automate the quality testing actions of a part.

Those activities are performed on a station where the robot precision and repeatability are combined with the cognition capabilities of human.

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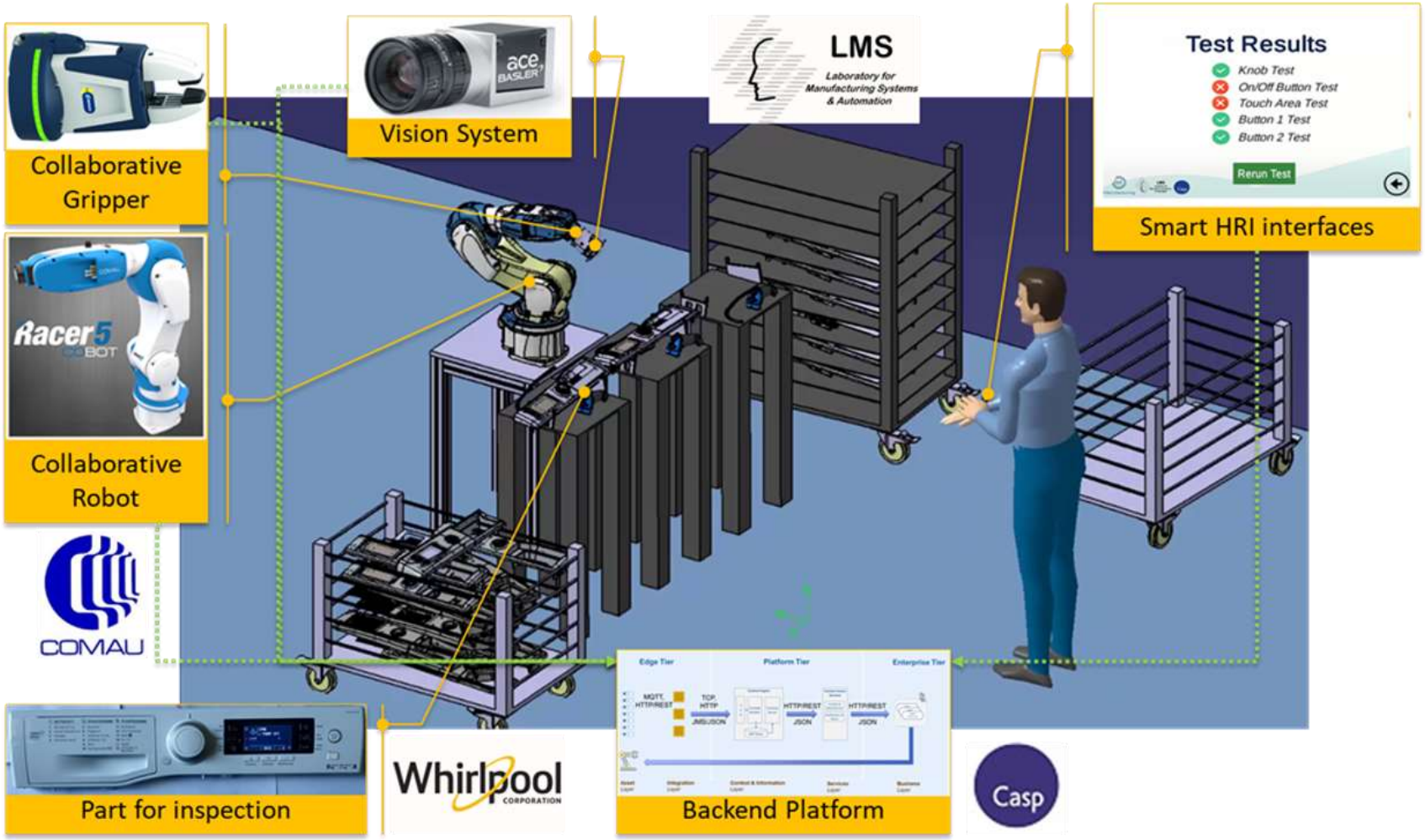
RUBIC - Proposed Solution



RUBIC – Expected Benefits

1

MANUFACTURING BENEFITS

Increase automation and digital transformation of a traditionally manual manufacturing process.

Improve quality assessment operations, avoiding quality detection failures and by logging test results for all products.

2

SOCIETAL BENEFITS

Improve working conditions for operators by automating part of their activities.

Avoid repeatable operations, leaving only the cognitive ones.

Minimize injuries and stress.

3

OTHER BENEFITS

Easy programming of current solution, by the operators, for new models.

Possibility to apply it in other industrial lines of white goods industry.

Increase efficiency in the executed operations

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RUBIC – Role of EIT funding support

- Provided opportunity to collaborate with big European industries
- Offered possibility to address a real industrial problem
- Created the conditions to implement, test and validate an hybrid solution
- Enhance the portfolio of technical partners with a new solution, ready for market

RUBIC – Results and next steps

- Setup RUBIC demonstrator in industrial environment
- Validate RUBIC solution
- Package the final cell into a commercial product

Knob rotation test

Button press test

Smart UI to initiate quality tests, check their execution status and create new ones

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Thank you

Activity Leader – Dr. Sotiris Makris

Laboratory for Manufacturing Systems and Automation (LMS)

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