metrologic group

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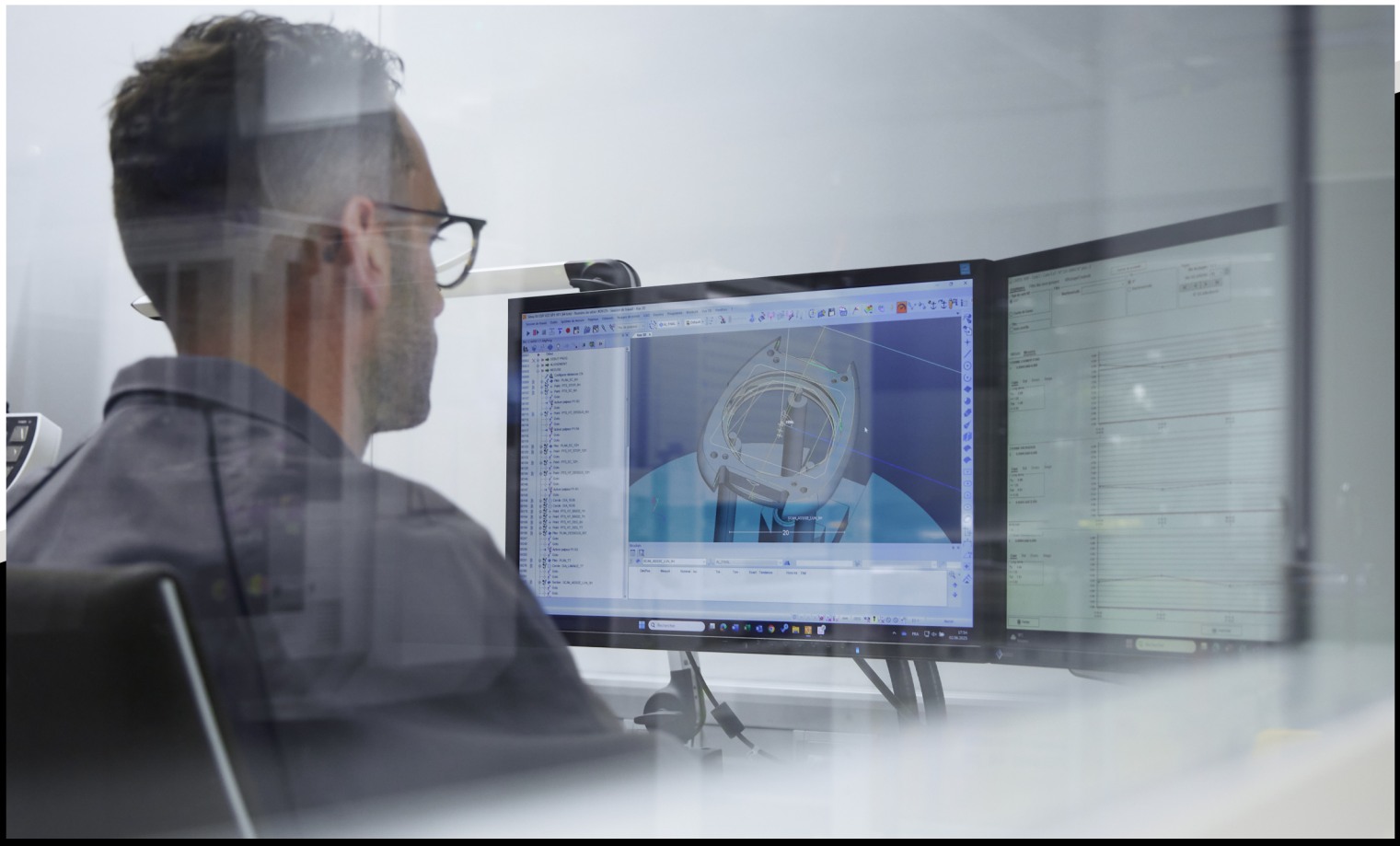
BVLGARI

PRECISION IN MOTION



CUSTOMER STORY

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At Bvlgari Watchmaking, innovation depends as much on the precision of the tools as on the expertise of those who use them.

By integrating a solution combining an ESPI Scanflash machine and Metrolog X4 software, the Swiss manufacturer has strengthened its quality control in production. This success is largely due to the involvement of Mathias Kaufmann, quality technician.

COMPANY INVOLVED

BVLGARI

Bvlgari was founded in the heart of Rome in 1884. Over the decades, the Brand has established a worldwide reputation as magnificent Roman High Jeweler and icon of Italian art of living. Bvlgari deeply believes in innovating the present for a sustainable future through its commitment to Social & Environmental Responsibility and giving back – to nature and to the community.

Roma (Italia)

MEET OUR SPEAKERS

Mathias KAUFMAN
Quality technician responsible for automated control

Alexandre GOUPY
Sales Manager for Eastern France & Switzerland

Samuel JABES
Co-director of ESPI

Learn more about Bvlgari

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WHEN FINE WATCHMAKING RELIES ON PEOPLE AND TECHNOLOGY TO ACHIEVE EXCELLENCE

Based in Switzerland, **the watchmaking division of Italian luxury goods group Bvlgari combines the brand's bold aesthetic with the high standards of Swiss watchmaking expertise**. Renowned for its ultra-thin models, including the iconic Octo Finissimo, the manufacturer oversees the entire process, from the internal movement to final assembly.

At the heart of this demanding process, the quality department plays a key role. It must ensure that **parts, which are often complex in shape, are manufactured at high speeds and with tolerances that are sometimes measured in thousandths of a millimetre.** This is the context in which Mathias Kaufmann, a quality technician in charge of automated control, works. **His mission is to make controls more reliable while helping operators become more autonomous.**

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LIMITS QUICKLY REACHED

Before the current solution was implemented, checks were mainly carried out manually. Operators used Excel spreadsheets and traditional measuring tools, such as callipers.

"*There were significant differences in measurements between operators, instruments were not always calibrated, and traceability was virtually non-existent,*" recalls Mathias Kaufmann.

This lack of standardisation led to misunderstandings in production and difficulties in analysing certain non-conformities. "*On certain parts, such as the Serpenti case, with its 5-axis machining, we simply had no reliable means of control,*" he explains.

In light of these findings, the need to structure quality control around an automated and reproducible tool became obvious.

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FOCUSING ON HARDWARE FIRST

The first step was to invest in a **Scanflash TC three-dimensional workshop measuring machine, supplied by ESPI.** Designed to operate in a production environment, this CMM stands out for its speed and accuracy, which are essential criteria for Bvlgari.

The machine allows checks to be carried out during production, several times a day, and meets internal requirements in terms of responsiveness and rigour. But very quickly, a limitation became apparent: "*The programming time was enormous, the risk of collision was high, and programming complex shapes was virtually impossible*," explains Mathias. As a result, the machine remained largely under-utilised.

Samuel Jabès, Co-Director of ESPI, points out that the **Ease of programming component was missing for the machine solution to be fully effective and therefore adopted by the Bvlgari teams.**

> *Not only does the machine offer unrivalled inspection efficiency in terms of dynamic performance, but thanks to MetrologX4, it is also easy to program. The advanced features of the software have enabled the Bvlgari teams to appreciate the programming and start trying new things by pushing the limits of the machine.*
>
> Samuel Jabès

THE TURNING POINT: INTEGRATING METROLOG X4

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In addition, offline programming via Silma X4 now **allows the quality team to create new programmes while the machine remains available for production.** The time savings are considerable and operators are never interrupted.

CONCRETE RESULTS, EXTENDED USES

The benefits are clear. Inspection time has been reduced **sixfold**. The number of dimensional problems detected downstream has **decreased significantly**. Use of the machine has been **extended to internal analysis and other departments.**

"*We now inspect 95% of our box production with this machine,"* says Mathias. "*Our analyses are more reliable and better understood, and I even have more internal requests to carry them out.*"

This new organisation also promotes a more collaborative culture of quality. Production is more stable and upstream adjustments are easier.

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A PROJECT BROUGHT TO LIFE

Behind this success story is one key player: Mathias Kaufmann. He was the one who saw the machine's potential, despite its initial limitations, and convinced management to give the project a second chance.

"*Without Mathias, the machine might have remained in a corner. He was the one who believed in the solution, learned how to use Metrolog X4, and showed that it could work*", explains Alexandre Goupy.

In addition to training himself in the use of the software, Mathias contributed to the evolution of the plans, the creation of complex setups, and the continuous improvement of the quality process. **His commitment perfectly reflects Bvlgari's values.**

EXPERTISE AT THE HEART OF THE PROCESS

The successful integration of ESPI's Scanflash and Metrolog X4 software has enabled Bvlgari Horlogerie to take a leap forward in quality control. Faster, more reliable and more reproducible, the solution fits perfectly with the requirements of the watchmaking industry.

Samuel Jabès adds that: "*Today, this comprehensive machine + 3D metrology software solution not only meets production needs but has also been extended to incoming inspection and certain prototypes or rapid tests. Bvlgari continues to increase the range of inspections carried out on our machine and has now also embarked on production control. With such rapid measurement results, production control becomes responsive and makes perfect sense. Its machine tool fleet will soon be able to be controlled automatically by the measurement results of ESPI's Scanflash and Metrolog X4 software.*"

Finally, this project demonstrates that the value of a tool is fully realised when it is supported by committed experts. **At Bvlgari, Mathias embodies this dynamic: that of expertise that evolves without ever compromising on standards.**

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This project demonstrates our desire to be at the forefront of quality, innovation, and performance. It allows me to be creative and make a tangible contribution to the excellence of our production.

Mathias Kaufman

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Samuel Jabès