

Data-driven machining: from measurement to prediction

31 August 2026, 09:00

Tom Jacobs

Discover how data, monitoring and models make your machining process smarter

Machining is becoming increasingly digital. But where do you start? And which data, models or sensors truly add value?

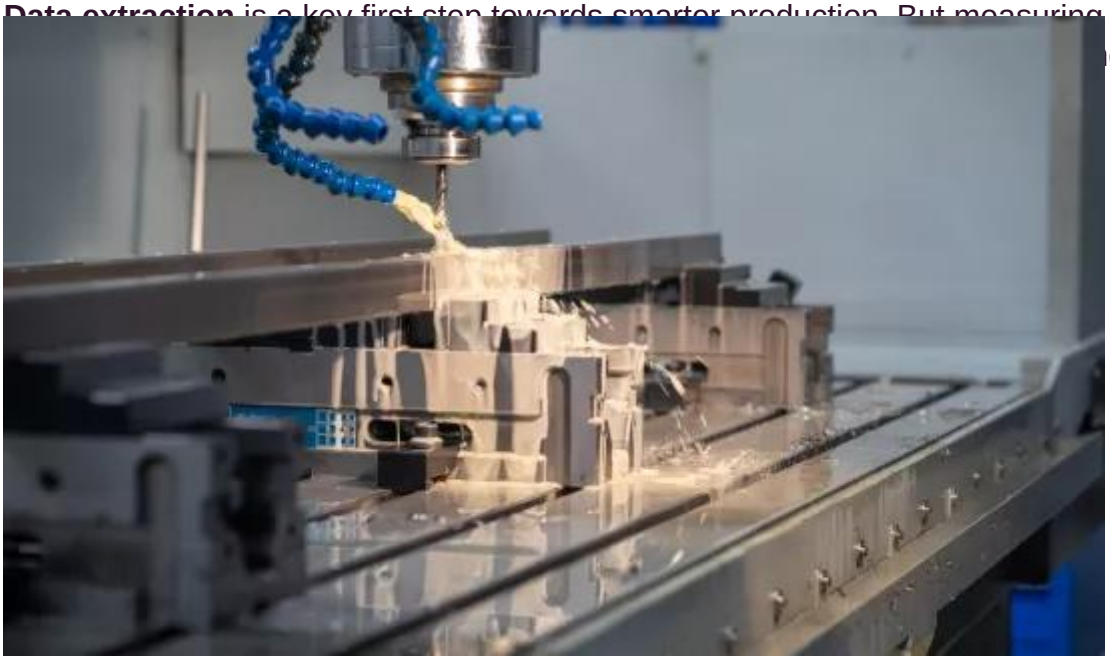
In this article series, you discover how to gradually gain more insight into your production process. From **data extraction** and **tool wear** to **predictive machining** and **surface roughness**: each article helps you make better decisions for more stable, predictable and efficient machining.

What to expect?

1. Towards predictive insights in machining
2. Managing tool wear effectively
3. Mobile platform for predictive machining
4. Casebook: predicting surface roughness more reliably

1. Towards predictive insights in machining

Data extraction is a key first step towards smarter production. But measuring without a clear goal



ents into actionable

In this article, you learn how to connect machines, use **process data** effectively and gradually evolve from monitoring to **predictive applications**.

Discover how to use process data in machining

2. Managing tool wear effectively

Tools always wear. The challenge is to replace them at the right time. Replacing too early increases costs. Replacing too late puts quality and production reliability at risk.

In this article, you learn how models, sensors and AI help you **better understand wear**, optimise replacement timing and avoid downtime.



3. Mobile platform brings predictive machining to your machines



rris and VIVES
m.

In this article, you discover how the mobile platform combines **proven models and live machine data**. This lets you test on your own machines what predictive machining can deliver for quality, stability and process optimisation.

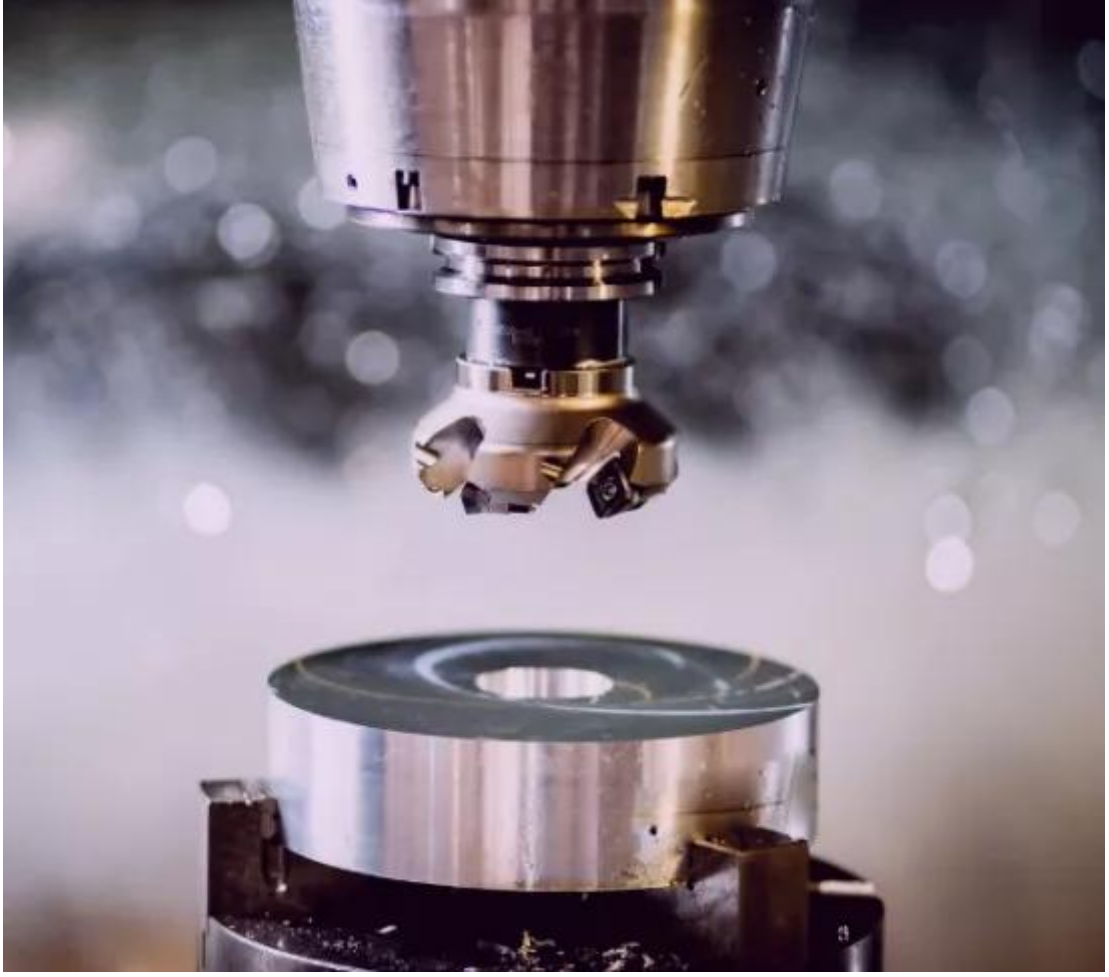
Discover the mobile platform for predictive machining

4. Casebook: predicting surface roughness more reliably

Surface roughness is crucial to the quality of a machined component. Yet it remains difficult to predict. Traditional formulas do not sufficiently account for tool wear, machine stiffness and material variations.

In this casebook, you discover how **sensor and machine data strengthen traditional models**. This gives you more reliable surface roughness predictions that better reflect your actual production environment.

Download the casebook on surface roughness (In Dutch only)



Would you like to take faster steps towards predictive production?

With the **4.0 Maturity Acceleration** project, you discover how to apply data and models in a practical way on the shop floor. You learn from real use cases and see what truly works in your production environment.

Discover how 4.0 Maturity Acceleration can boost your production

Authors



Tom Jacobs