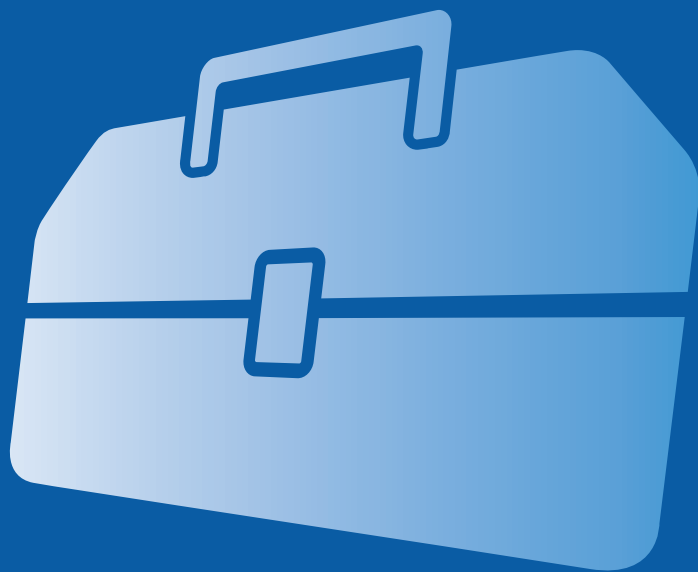evatec
process systems

OPTICS
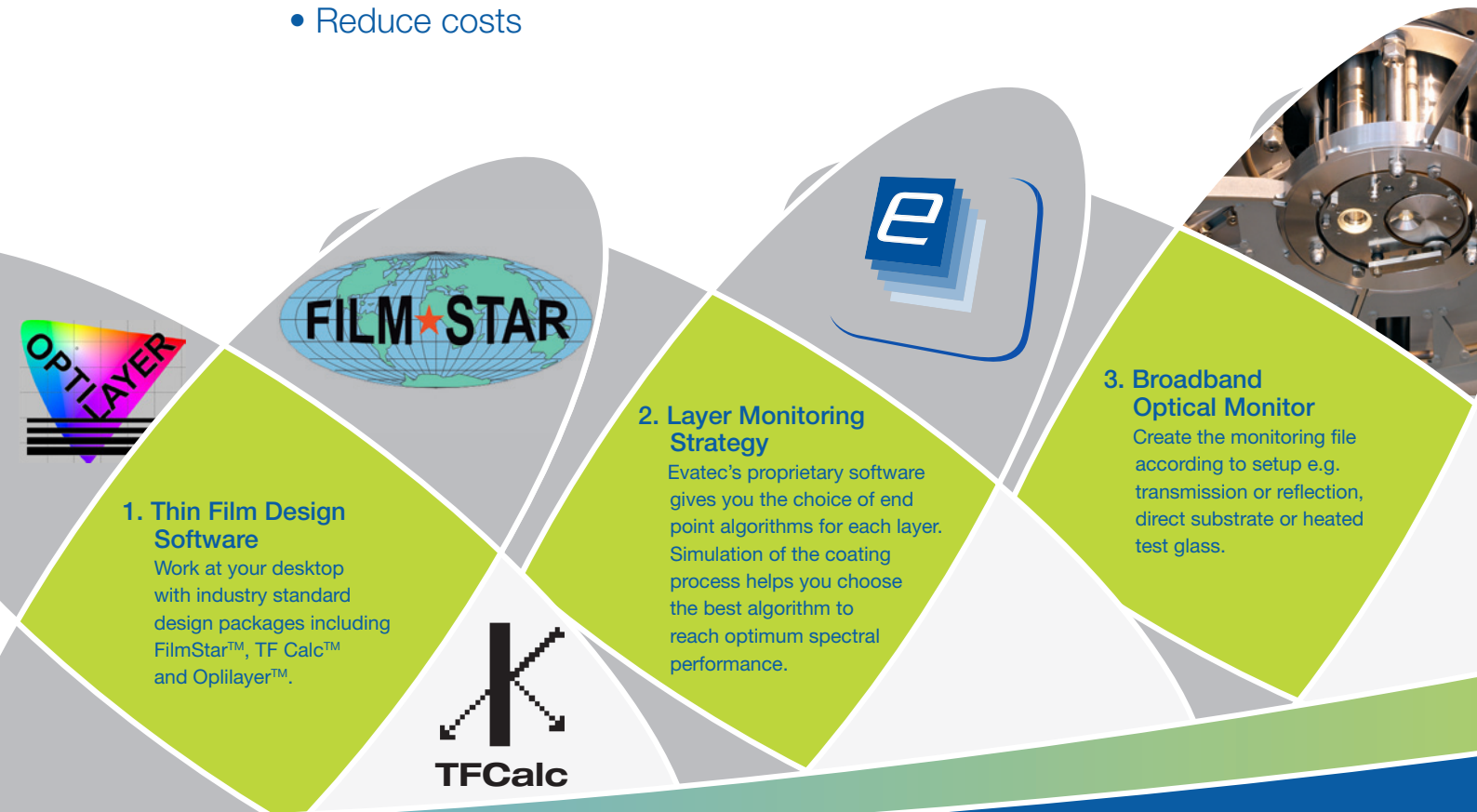# TOOLBOX

For "Fast Track" thin film processes

Seamless processes
From Design....
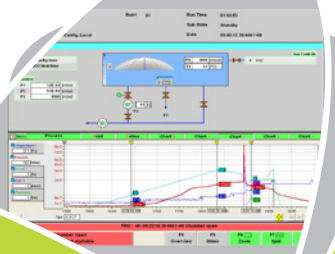
Why integrate your processes?
- Minimise process development times
- Achieve higher process performance
- Reduce costs

1. Thin Film Design Software

Work at your desktop with industry standard design packages including FilmStar™, TF Calc™ and Oplilayer™.

2. Layer Monitoring Strategy

Evatec's proprietary software gives you the choice of end point algorithms for each layer. Simulation of the coating process helps you choose the best algorithm to reach optimum spectral performance.

3. Broadband Optical Monitor

Create the monitoring file according to setup e.g. transmission or reflection, direct substrate or heated test glass.

Rapid changes in production demand requires "fast track" installation of complex thin film processes. Minimising process development time keeps production throughput high reducing unit costs. The initial theoretical thin film design calculation is just the start for a new process. The performance of the coating sources must be optimised for the exact materials and layers being processed, the sources themselves must be monitored at a point as representative as possible of the actual substrates being coated and then individual layers must be terminated at just the right time to hit target spectra in the thin film design.

Integration of all these aspects removes errors and ensures the quickest development of high end optical processes.

...to Finished Product

4. Process Recipe File Generation
Match layer modules automatically using default modules, (e.g. rate, gas flows for each material etc.) or review and make manual adjustments for critical layers. Import the strategy into Khan's recipe editor via network or USB.

5. Coating Execution
Load the substrates and let Evatec's Khan system and process controller manage the production from door closure to vent, with data logging of process parameters defined by you.

6. Finished Product
Achieve reliable processes in the shortest development times. Edge repeatabilities T50<± 0.2% *

Evatec brings you

OPTICS TOOLBOX

Office

- Thin Film Design Software → Thin Film Design
- Monitoring Strategy Generator → Process File
- Process File → KHAN Coating Process Controller
- KHAN Coating Process Controller ↔ GSM1100 BB Optical Monitoring System

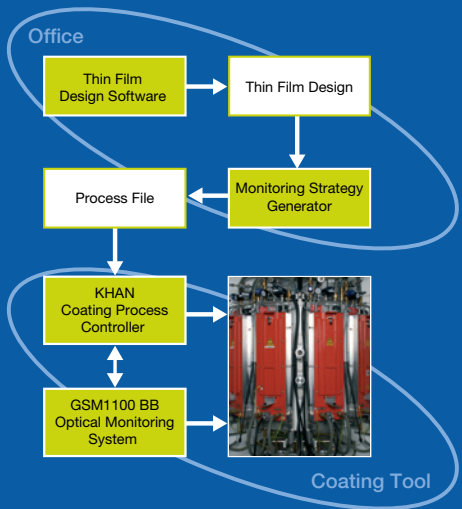**Coating Tool**

Best Flexibility
Works with industry standard thin film design software

Seamless integration
Coating platform, optical monitoring and software all from one supplier
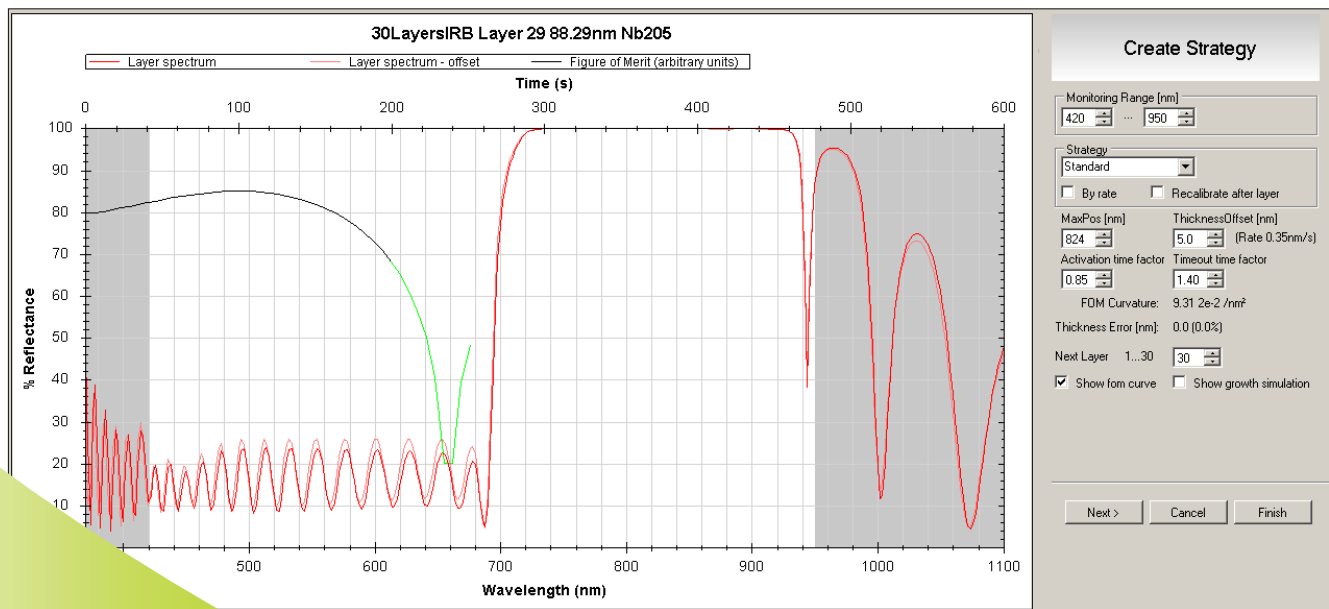
Proven results
Contact our applications team for a demonstration how "Optics Toolbox"can transform your production processes

*with MSP Sputter

The complete solution

Coating platform, optical monitoring and software all from one supplier.

30LayersIRB Layer 29 88.29nm Nb205

— Layer spectrum — Layer spectrum - offset — Figure of Merit (arbitrary units)

Create Strategy

Monitoring Range [nm]
420 ... 950

Strategy
Standard
☐ By rate   ☐ Recalibrate after layer

MaxPos [nm]   ThicknessOffset [nm]
824   5.0   (Rate 0.35nm/s)

Activation time factor   Timeout time factor
0.85   1.40

FOM Curvature: 9.31 2e-2 /nm²

Thickness Error [nm]:   0.0 (0.0%)

Next Layer   1...30   30

☑ Show fom curve   ☐ Show growth simulation

Next >   Cancel   Finish

Proprietary Evatec strategy generator software helps you choose the best algorithm for end point determination in each layer of the process.

About Evatec

Evatec offers complete solutions for thin film deposition and etch in the optical and semiconductor markets. Evatec engineers are able to offer practical production advice from R&D to prototyping and mass production. We recognize that no single technique offers the answer to all problems. With a technology portfolio including standard and enhanced evaporation as well as sputter, we are ready to offer sampling services and custom engineering to meet our customers individual needs.

We provide sales and service through our global network of local offices. For more information visit us at www.evatecnet.com or contact our head office.