

Richard van Hooijdonk

KEYNOTE

AI & the future of manufacturing

Factories that adjust their own processes, materials designed by AI and robots that learn a new task in an afternoon. In tomorrow's industry, people design, choose and lead; AI measures, calculates and predicts.

Every kilowatt-hour counts, every breakdown costs money and experienced skilled workers are getting scarce. AI helps the factory produce more efficiently and prevent breakdowns.

In the smart factory that futurist and trend watcher Richard van Hooijdonk describes, systems adjust themselves and people and machines can work together more effectively. This keynote shows the benefits, and where skilled workers' expertise remains indispensable. In many factories AI is already part of the job. Cameras check every product on the line, sensors flag wear before a machine fails, and AI keeps adjusting production lines and processes to protect quality and cut energy use and scrap. Cobots work next to fitters, and new lines exist first as a digital twin. Further ahead lie factories that run themselves, humanoids working shifts, robots that share skills between plants and materials developed in autonomous labs. The organisational questions matter just as much: what the operator does when the system does more on its own, how shop-floor experience finds its way into the AI, and who decides when to stop the line. The keynote shows what already runs in factories, what is being trialled and what the factory of 2040 could look like. ASML, Siemens, 3M, DSM and Signify have booked him before. Which work in your factory would you hand to a machine first?



RICHARD VAN HOOIJDONK

Richard van Hooijdonk is a trend watcher, futurist and international keynote speaker. Many trend watchers and futurists look at the future from a distance. Richard van Hooijdonk lives in it. His team consists of people and AI agents, and he has several chips implanted in his body. He speaks about AI and new technology, the organisation of the future and leadership in the AI era. He takes you into a future you can barely picture today, and shows how you can steer it yourself.

3,000+	650,000+	30+	Bestselling
keynotes	participants	countries	author

What the keynote covers

NOW AI in manufacturing

What AI already does on the line, in planning and in the process.



01 AI quality inspection

APPLIED

Cameras and AI check every product on the line. Next: a line that corrects itself as soon as the risk of a defect starts to rise.



02 Predictive maintenance

APPLIED

Sensors measure vibration, heat and sound. AI picks up signs of wear, so the fitter can step in before the machine grinds to a halt.



03 AI production planning

APPLIED

AI weighs sequence, changeover times, staffing and delivery dates at once, and reworks the plan for a rush order or a breakdown.



04 AI process control

APPLIED

Production lines and processes adjust themselves continuously: AI keeps quality stable and reduces scrap and energy use.



05 The copilot that sees what you see

IN PILOTS

An AI assistant that knows the manuals and the fault history watches through a camera or AR glasses and talks the fitter through the job.



06 Generative design

APPLIED

AI designs hundreds of variants of a part within the limits for weight, strength and cost. The engineer chooses.



07 AI agents on the factory floor

IN PILOTS

AI agents gather fault data, raise a work order, order the part and book the fitter.



08 The electric factory

APPLIED

More and more factories are going electric. AI matches energy-hungry steps to power prices and capacity, and calculates emissions per product.



09 Cobots and the smart factory

APPLIED

Robots work next to people when the task and the safety measures allow it. AI helps them recognise parts, pick them up and learn new tasks.



10 The factory twin

APPLIED

A digital twin of a line or a whole plant tests a change virtually first. AI runs the scenarios before anything is altered.

COMING NEXT The future of manufacturing

Where the factory could be in five to fifteen years, with AI as the engine.



11 The factory that runs itself

FUTURE SCENARIO

Quality, planning, maintenance and energy in one AI system that makes its own decisions. People set the goals and draw the lines.



12 Humanoids working shifts

FUTURE SCENARIO

Robots built like humans are getting smarter and cheaper. In the 2030s they could join the shift rota.



13 The robot that keeps learning

FUTURE SCENARIO

In 2040 robots could learn to handle new products from a few examples, and share their skills with robots in other plants.



14 Materials made to order

FUTURE SCENARIO

Materials devised by AI are made and tested day and night in robot labs. What took twenty years could soon take a few.



15 The quantum-designed catalyst

FUTURE SCENARIO

Quantum computers may one day calculate reactions that defeat ordinary computers. That could yield catalysts needing less energy.



16 The factory as a materials mine

FUTURE SCENARIO

Products return to the factory. AI-driven robots take them apart, and metals and plastics go back on the line.

PEOPLE & ORGANISATION

The manufacturing organisation of the future

How AI changes roles, shifts, leadership and culture in the factory.



17 The AI-first organisation

Robots and AI take over measuring, inspecting, planning and predicting. Operators focus on their craft: judging quality and improving the process.



18 The operator as conductor

Operators direct whole lines. New roles arrive: fleet managers for humanoids, trainers of robot models and supervisors of AI agents.



19 Craftsperson, robot and copilot

Fitter, cobot and copilot share the work on the line. The robot lifts, the AI searches and calculates, the person judges and decides.



20 Leading on the factory floor

Leaders in industry take the initiative on AI and new technology, and motivate their people to build the factory of the future together.



21 Craft knowledge as data

Skilled workers share their practical knowledge with AI systems. Helping to design those systems makes them more willing to share.



22 The future academy

Operators and fitters learn to work with AI and new technology in a future academy, on their own line. The factory does not wait for the colleges.



23 Moving ahead as an ecosystem

Lessons spread quickly. Working with start-ups, scientists, partners and governments worldwide, an organisation innovates faster than alone.

THE OTHER SIDE

The other side: responsibility and risk

Data, process safety and crime: the flip side of the smart factory.



24 Data as the foundation

AI only works when data from every part of the organisation is available, reliable and connected. That is the foundation of a factory that runs on AI.



25 Safe intervention in the process

In process control, AI works within fixed limits, and independent safety systems come first. In chemicals, that protects people and the environment.



26 Industrial cybercrime

Criminals use AI to find weak spots in factory systems, make calls with cloned voices and halt production with ransomware.

DURATION
30, 45, 60 minutes or longer, with time for questions

LANGUAGE
Dutch or English

FORMAT
On location or online

FEE
On request

PLUS

"Richard succeeded excellently in waking up our leaders and setting them on the path to the future: after the lecture, discussions took place across various parts of the organisation about the topics covered, and initiatives have been set in motion."

Aart van Haren Managing director, PLUS

Deloitte.

"A dazzling journey through new technology. The enthusiasm and energy during his presentation, combined with the visuals, provided a successful kick-off to our event."

Patrick Steemers Partner, Deloitte

A keynote for your manufacturing event

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