Industry 4.0 stands for the introduction of the internet to the shop floor. Networked, autonomous products and decision-making processes control value-added networks almost in real time.

This is made possible by workpieces and means of production that are digitally linked, i.e. have IP addresses, and hence can communicate. The supply chain is not exempted from this trend. New competitors compete for customers, and new technologies change cooperation on a cross-company scale.

The products manufactured individually for each customer, but still under mass production conditions, are supplied to the recipients just in sequence and just in time. Here, logistics plays a key role. The smart logistics of the future...

- ... requires configuration rules to define the scope of possible changes.
- ... adjusts its structure (e.g. transport systems) and its parameters (e.g. the quantities passed on) specific to a situation, and autonomously.
- ... requires a new kind of personnel training.
- ... requires new kinds of planning systems.

Sourcing, planning and distribution are concrete examples of this approach. There will be a change of paradigm. Inventory-driven supply will be superseded by consistent demand-driven supply (smart sourcing). This requires a consistent horizontal chain of information flow — from the place of consumption down to the supplier. Production and the supply of materials to production are self-controlled by intelligent, automated equipment (smart planning), and the consistency of the processes is assured, including customer logistics (smart distribution).

Smart distribution concepts are already being developed in some current projects in which manufacturers have returned to focusing on their core business. They are networked with service suppliers that take over for them packaging solutions, consumption calculators, shipment tracking and delivery.

Comparable developments are seen also on the procurement side. Smart procurement providers take over supply chain management, warehousing, manufacturing logistics, automated purchase order management with new IT solutions, goods tracking, and reporting. In this way, procurement lead times are significantly shortened, order lead times are managed end-to-end from customer expectation to customer satisfaction, and logistics costs are reduced.