

# Talking 'Factory of the Future' at Hannover Messe

Equity Research

## We spoke with five companies pioneering the smart factory

### Hannover Messe: The world's largest industrial fair

We attended Hannover Messe in Germany, the world's largest industrial fair with >5,000 firms showcasing the latest manufacturing technologies. We met 5 companies highlighted in our recent report *Factory of the Future* (April 13) where we profiled 6 key technologies capable of unlocking >\$500 bn of cost savings. We see Siemens and Dassault Systemes as the most compelling Buy-rated names in Europe on the theme.

### Takeaway #1: Incumbents focus on M&A heating up

In order to provide the full digital manufacturing package Siemens has stated that it intends to continue to use its balance sheet to grow in PLM software. We also expect to see further bolt-ons made by Dassault as the two push smaller competitors out of this space. Kuka is increasing its investments in innovative start-ups (e.g. Franka). We expect this trend to continue as traditional equipment providers seek to stay ahead.

### Takeaway #2: Business models are evolving

The increased connectivity of machines means that equipment providers will have to interact more with their installed base. For Kuka, this is changing the way it interacts with customers as they become more solution orientated and begin to offer "efficiency as a service".

### Takeaway #3: The race to a fully integrated PLM offering

Dassault and Siemens are closest to providing the complete PLM offering (a market worth \$30-35 bn by 2020 with a 8% CAGR on our estimates) – and the two continue to push ahead. Siemens wants to leverage its strong industrial footprint to provide a closed-loop manufacturing system capable of communicating back to itself. Dassault highlighted how 3D EXPERIENCE offers a more integrated offering which is helping penetrate new verticals.

### Takeaway #4: Standardisation key to harness IoT potential

Schneider emphasized the importance of standardized data transfer between devices to fully harness the potential of the IoT. This view however is not consensual, as Siemens offers a closed-loop system.

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#### READ THE ORIGINAL

[Profiles in Innovation: Factory of the Future](#)  
(April 13, 2016)

In the third report of our *Profiles in Innovation* series, we explore six technologies driving the transition to a more connected, efficient and flexible factory floor.



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## Key takeaways from Hannover Messe 2016

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Over 5,000 companies attended Hannover Messe this year; we used it as an opportunity to speak with five of the key listed European players in the future of manufacturing.

### Kuka (KU2G.DE; Not Rated)

We attended Kuka's Capital Markets Day which was hosted in conjunction with the fair. Management emphasized how its business model is evolving and its expectations that general industry will drive growth in robotics. Key takeaways:

- **Evolving business model:** In the Factory of the Future, the business models of equipment providers will be forced to adapt. Management emphasized that they are moving away from selling individual robots to a solution-based business model or "Efficiency as a Service" where customers are offered a 2% efficiency gain for Kuka to deliver and with more opaque pricing.
- **Increased focus on software:** In addition, it is becoming a more software-centric organization, expecting to double its software R&D workforce over the next 5 years and announcing partnerships with larger software incumbents: salesforce and Infosys.
- **Robotics growth in general industrial:** Kuka also unveiled a new light-weight robot ideal for industries outside of automotive which it sees as driving robotics growth in the future. In our Factory of the Future report, we highlighted: Electronics, Machinery and Food & Beverage as the verticals with the greatest savings potential to automate.
- **Start-ups leading innovation:** The importance of start-ups and small private companies in developing the latest technologies is highlighted by the number of investments Kuka has made and the partnerships it is developing, for example with Nebbiolo (operational software) and Franka (low-cost collaborative robots).

### Siemens (SIEGn.DE; Buy)

We spoke with representatives from Siemens on how they are leveraging its strong position (and its balance sheet) to provide the full digital factory offering. Key takeaways:

- **Full digital offering is paramount:** Siemens hopes to provide a full digital offering – a closed-loop system where the manufacturing ecosystem is able to communicate throughout the products life, autonomously re-designing itself and optimizing production, all through Siemens' software.
- **M&A will remain core:** In a news conference, a Siemens board member reiterated it will continue to buy PLM software companies at the rate it has been in recent years. This follows the agreement in January to buy U.S. engineering software firm CD-adapco for \$970 million.

### Schneider Electric (SCHN.PA; Neutral)

We spoke with representatives from Schneider Electric on how it is positioned for the IT/OT convergence and importance of standardisation in data transfer. Key takeaways:

- **IT and OT are converging:** Schneider sees a continued convergence of operational technology and information technology as communication between

the two areas increases. These are two areas in which Schneider already operates and expects to do well.

- **Standardisation of machine communication key to IoT adoption:** Key to this trend and in order to fully harness the potential of the Internet of Things is the increased standardisation of data transfer between machines and other field equipment (such as PLCs, robots, and servers) – Schneider takes an open stance to data transfer but warns of a damaging “data war” which will ensue if equipment providers launch closed systems.

## Dassault Systemes (DSY.PA; Buy)

We spoke with representatives from Dassault Systemes, the PLM market leader, on the challenges that lie ahead using Augmented Reality in manufacturing. Key takeaways:

- **End-to-end offering:** Dassault highlighted its 3D EXPERIENCE offering which aims to provide a more integrated real-time package with a wider range of Dassault products (from CAD to collaboration, simulation, and digital manufacturing), as well as help make their products more appealing to new verticals such as consumer products, marine and energy.
- **AR technology capability:** Dassault showcased new applications of its software with Augmented Reality for manufacturing. It emphasized hardware constraints are not a concern (given the pace of improvements) but key barriers to adoption are finding the optimal use of the technology and being able to fully integrate it. In *Profiles in Innovation: Virtual and Augmented Reality*, January 13, 2016, our analysts estimated that the addressable market for AR in manufacturing could be worth \$1.5 bn by 2020 and >\$4.5 bn by 2025.

## ABB (ABBN.S; Sell)

We spoke with representatives from ABB on its intentions to increase presence in discrete manufacturing software and its latest advances in robotics. Key takeaways:

- **Growth in discrete manufacturing software:** ABB stated its intentions to grow its software product offering in discrete manufacturing. It demonstrated its PLM software, albeit it has a much more limited offering than competitors. It also showcased its latest SCADA software released this week which is used to monitor operational efficiency of equipment.
- **Artificial Intelligence a powerful enabler of cobot expansion:** Demonstrating their collaborative robots, despite limited levels at the moment, it highlighted the increasing role artificial intelligence will have to play in programming collaborative robotics

## Key risks and valuation methodology

### Exhibit 1: Key risks and valuation methodology (12-month price targets)

Ticker	Name	Currency	Price	Rating	Price target	Key risks	Valuation Methodology
ABB.N.S	ABB Ltd.	USD	20.49	Sell	17.50	Upside risks: M&A, accelerated buyback/key shareholders raising stakes, higher earnings.	2017E EV/IC vs ROIC/WACC
DAST.PA	Dassault Systemes	EUR	70.36	Buy	86.00	M&A integration; sales execution; higher investments; and FX exposure	29x CY17E PF EPS
SCHN.PA	Schneider Electric	EUR	58.99	Neutral	60.00	Downside: greater-than-expected weakness in China, deteriorating oil & gas demand, delays with Invensys' integration, lower volume/price, FX headwinds, large value-destructive M&A. Upside are the reverse of these.	2017E EV/IC vs ROIC/WACC
SIEGn.DE	Siemens AG	EUR	95.3	Buy	103.00	Downside: (1) slower restructuring of underperforming businesses; (2) execution risks; (3) value-dilutive M&A; (4) weaker FCF and volume/price.	2017E EV/IC vs ROIC/WACC

Source: Datastream, Goldman Sachs Global Investment Research

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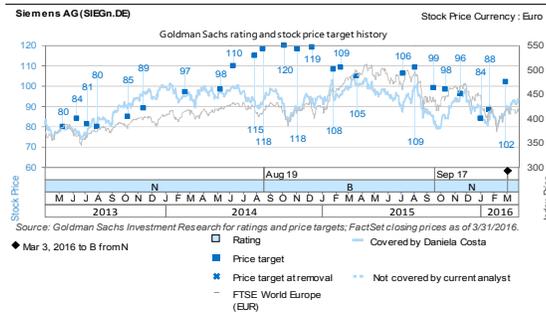
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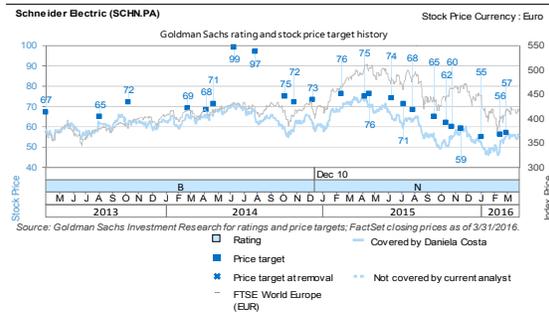
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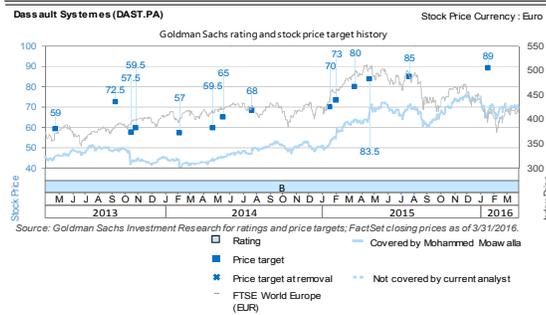
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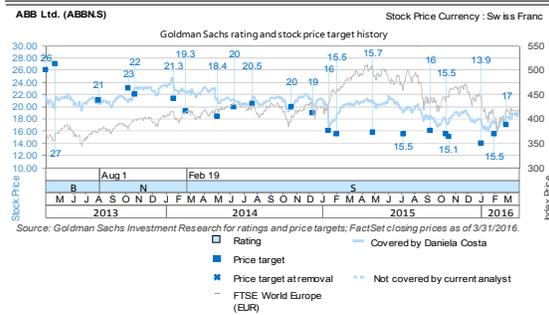
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