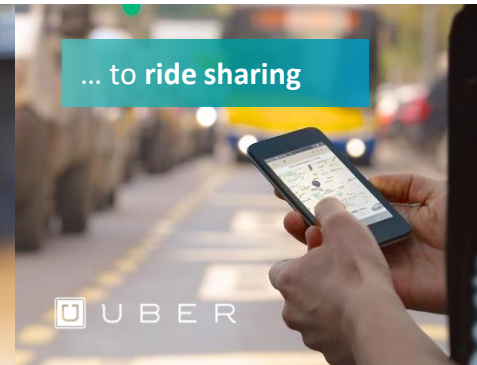
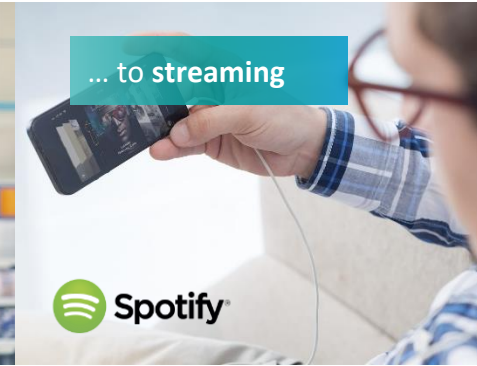
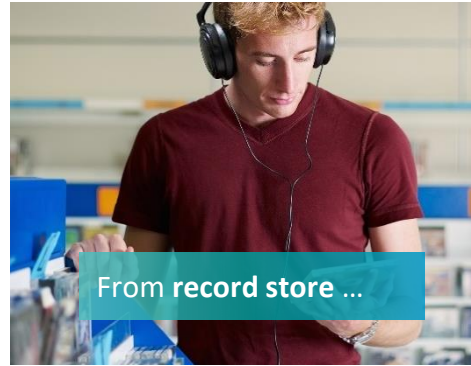


SIEMENS

Digitalization in machine tool
manufacturing: Implement now!

Andrea Gozzi





Speed



Flexibility



Quality

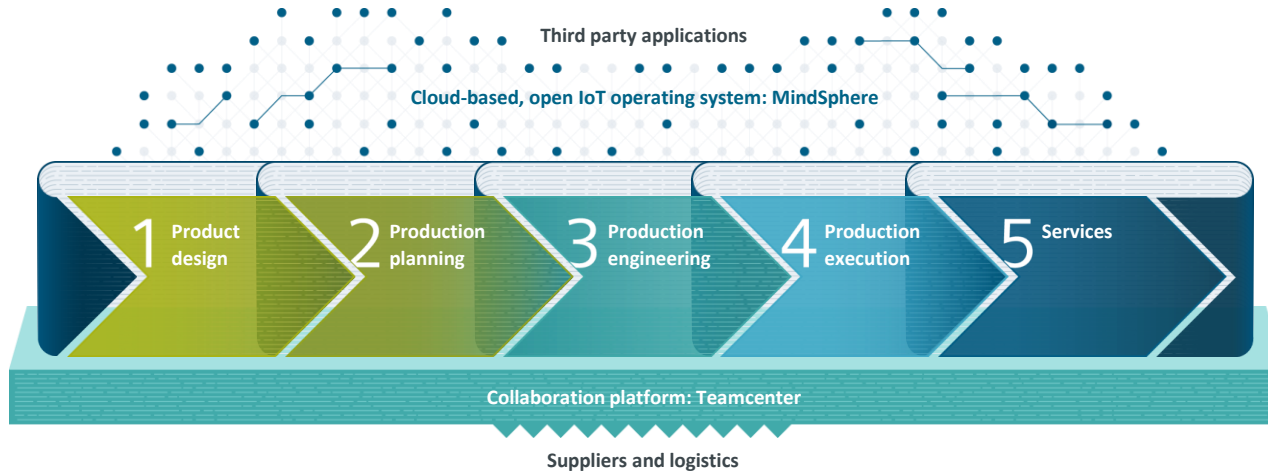


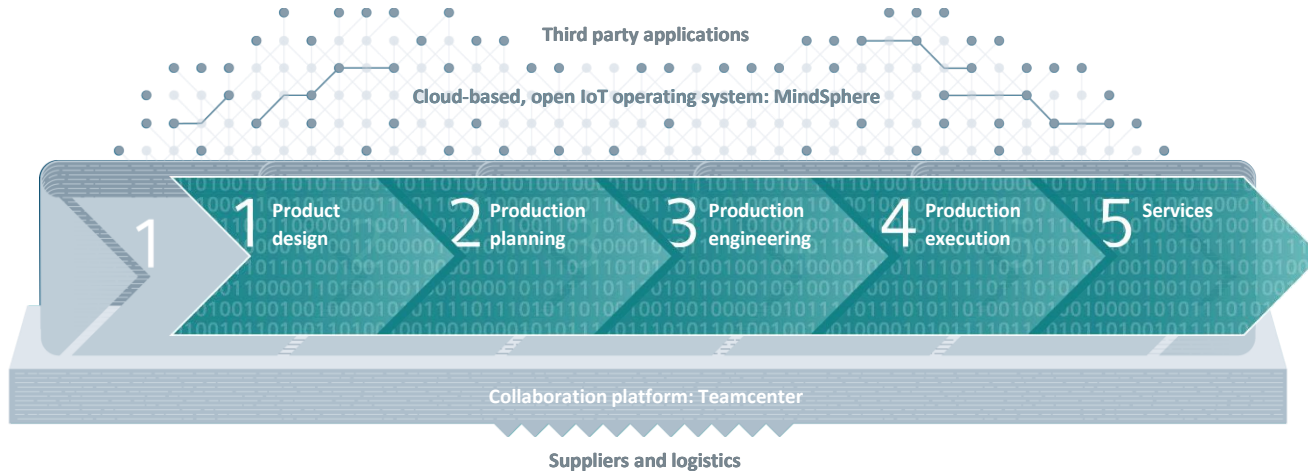
Efficiency



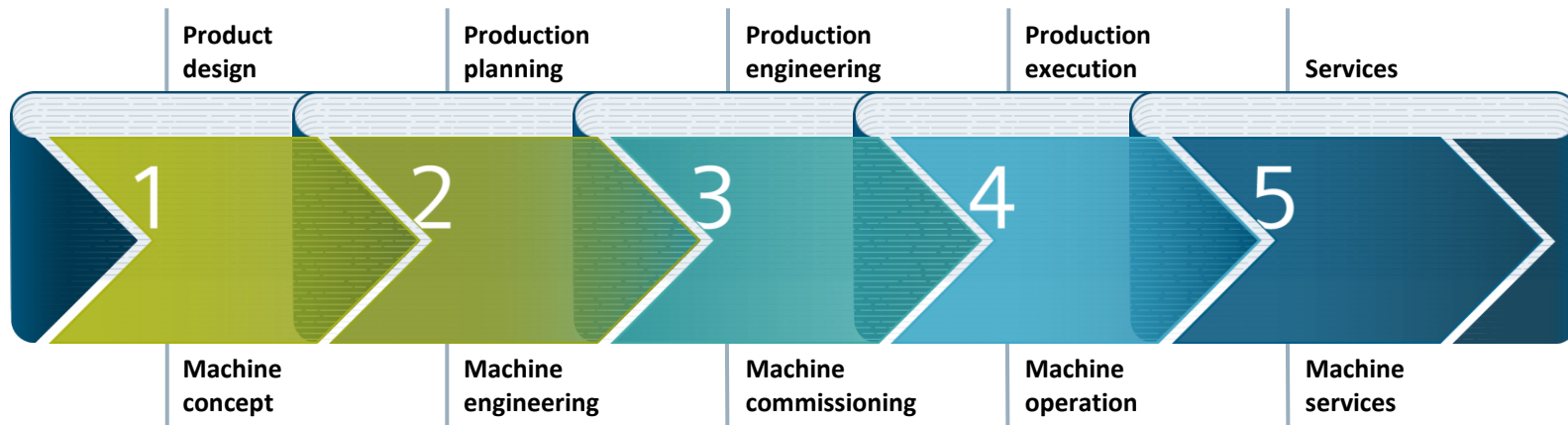
Security





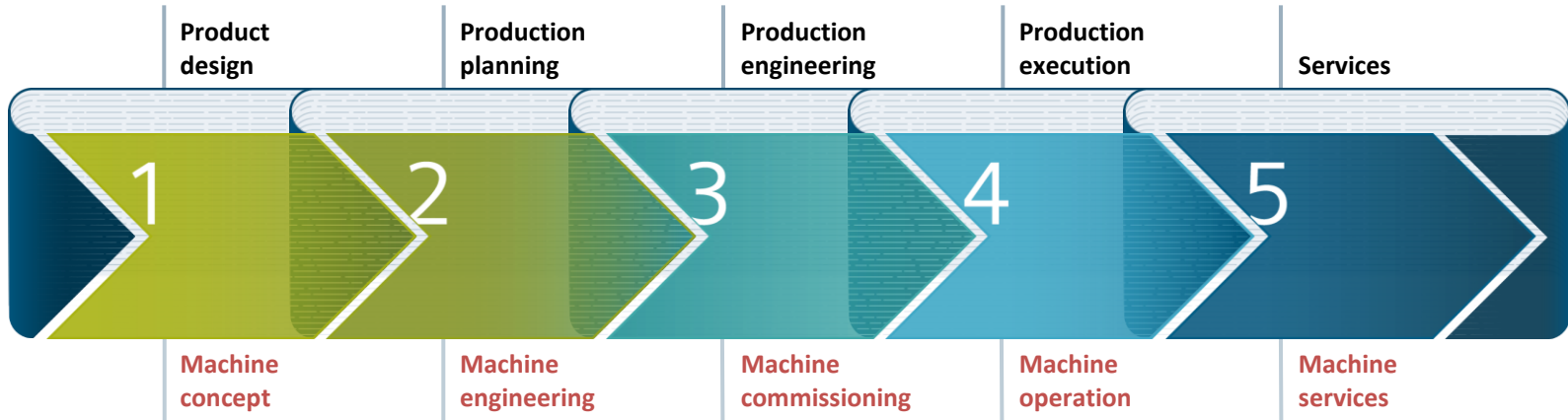


Product manufacturer perspective



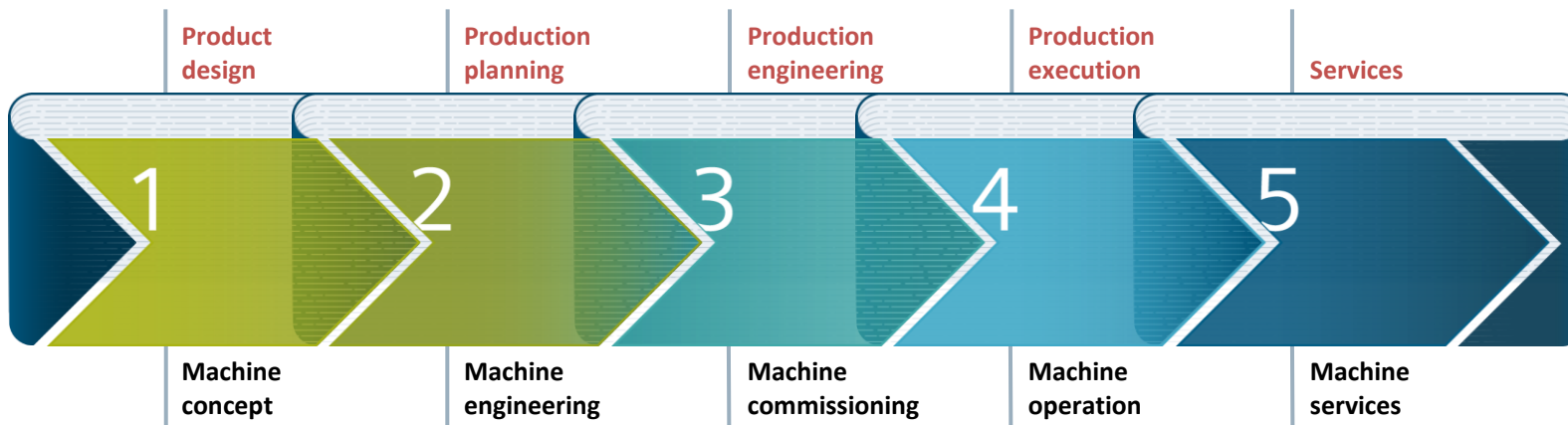
Machine builder perspective

Product manufacturer perspective



Machine builder perspective

Product manufacturer perspective

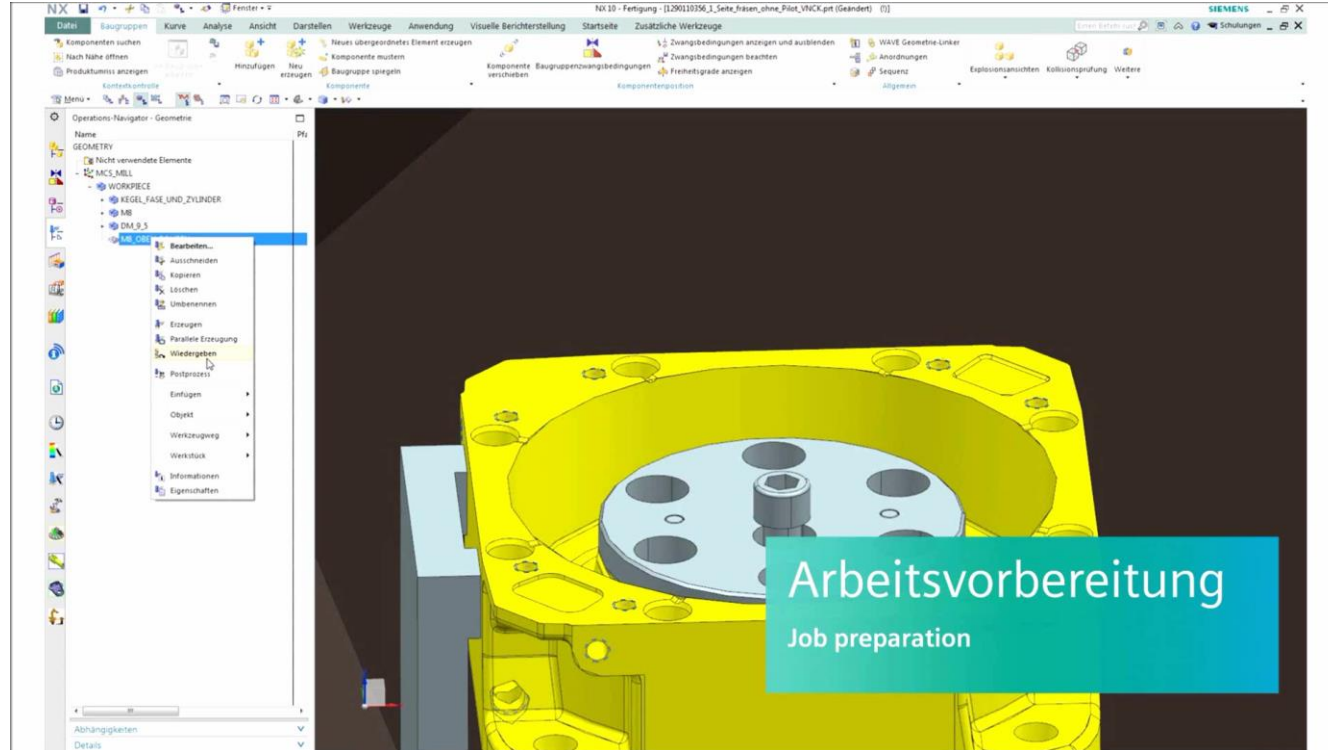


Machine builder perspective

NC programming
and process-
simulation

NX

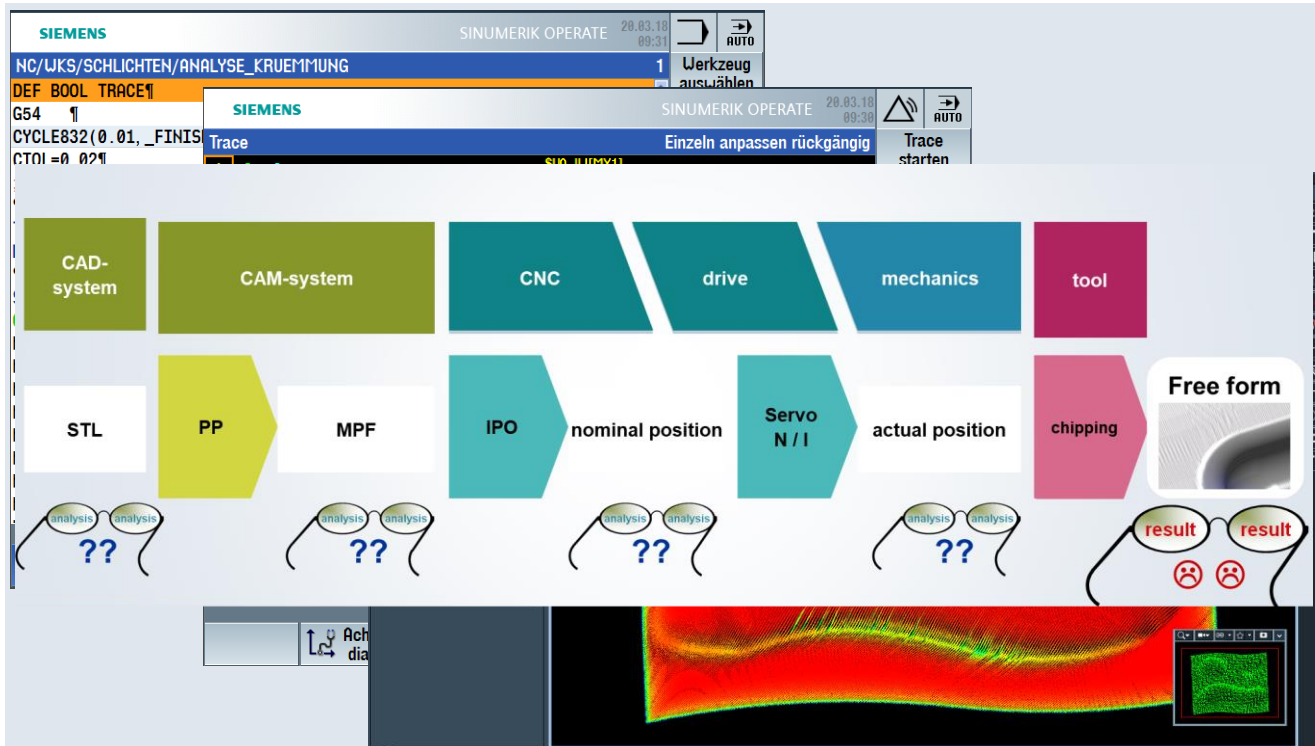
Virtual
Machine



Optimize quality

Detect CAM
issues

Analyze
MyWorkpiece



The screenshot shows the Siemens SINUMERIK OPERATE interface. At the top, there are menu items like 'Werkzeug auswählen' and 'Einzeln anpassen rückgängig'. Below this is a process flow diagram with the following components:

- CAD-system** (green box)
- CAM-system** (green box)
- CNC** (teal trapezoid)
- drive** (teal trapezoid)
- mechanics** (blue trapezoid)
- tool** (purple box)

Below the top row, there is a sequence of steps:

- STL** (white box)
- PP** (yellow arrow)
- MPF** (white box)
- IPO** (teal arrow)
- nominal position** (text)
- Servo N / I** (teal arrow)
- actual position** (text)
- chipping** (pink arrow)
- Free form** (white box with image)

Underneath the flow diagram, there are pairs of glasses icons with 'analysis analysis' written on them. The first four pairs have '??' below them, indicating unknown or missing analysis. The last pair has 'result result' and two red sad face icons, indicating a failed or poor quality result.

At the bottom right, there is a large image showing a surface analysis with a color gradient from red (high error) to green (low error). A small inset shows a magnified view of the surface texture.

Make your production more efficient and flexible

Manage MyMachines



Fleet Manager > sag-fmtde / TAC_SiemensAG / TAC / EMCO_HYPERTURN_65

Assets 6 / 136

Filter & sort + Search

Demorack_828D_TAC	28 ▲
Customer: TAC_SiemensAG	27 ●
Germany, Frauenaucher Straße 80, 91058 Erlangen	
DMU60eVo	28 ▲
Customer: TAC_SiemensAG	27 ●
Germany, Frauenaucherstr. 80, 91056 Erlangen	
EMCO_HYPERTURN_65	89 ▲
Customer: TAC_SiemensAG	1 ◆
Germany, Frauenaucherstr 80, 91056 Erlangen	195 ●
HYUNDAI_WIA_I_CUT_380T	1 ▲
Customer: TAC_SiemensAG	4 ◆
Germany, Frauenaucherstr. 80, 91056 Erlangen	3 ●

FMT Dashboard

EMCO_HYPERTURN_65

Online since 18.07.2017 05:15 last 8 hours

Machine status

unknown status

Production

Technical distur...

organizational d...

no disturbance

23:00 18-Jul 01:00 02:00 03:00 04:00 05:00 06:00

Connection status: Online

Feed Override: 100 %

Spindle Override: 100 %

NC program status: cancelled

Operation mode:

NC program status

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Fleet Manager > sag-fmrtd / TAC_SiemensAG / TAC / EMCO_HYPERTURN_65

Assets 6 / 136

Filter & sort + Search

Demorack_828D_TAC	
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HYUNDAI_WIA_I_CUT_380T	1 ▲
Customer: TAC_SiemensAG	4 ◆
Germany, Frauenaucherstr. 80, 91056 Erlangen	3 ●

FMT Dashboard Explore

* [s] axis_temp

UTC 06:46 07/17/17 07/23/17 Week

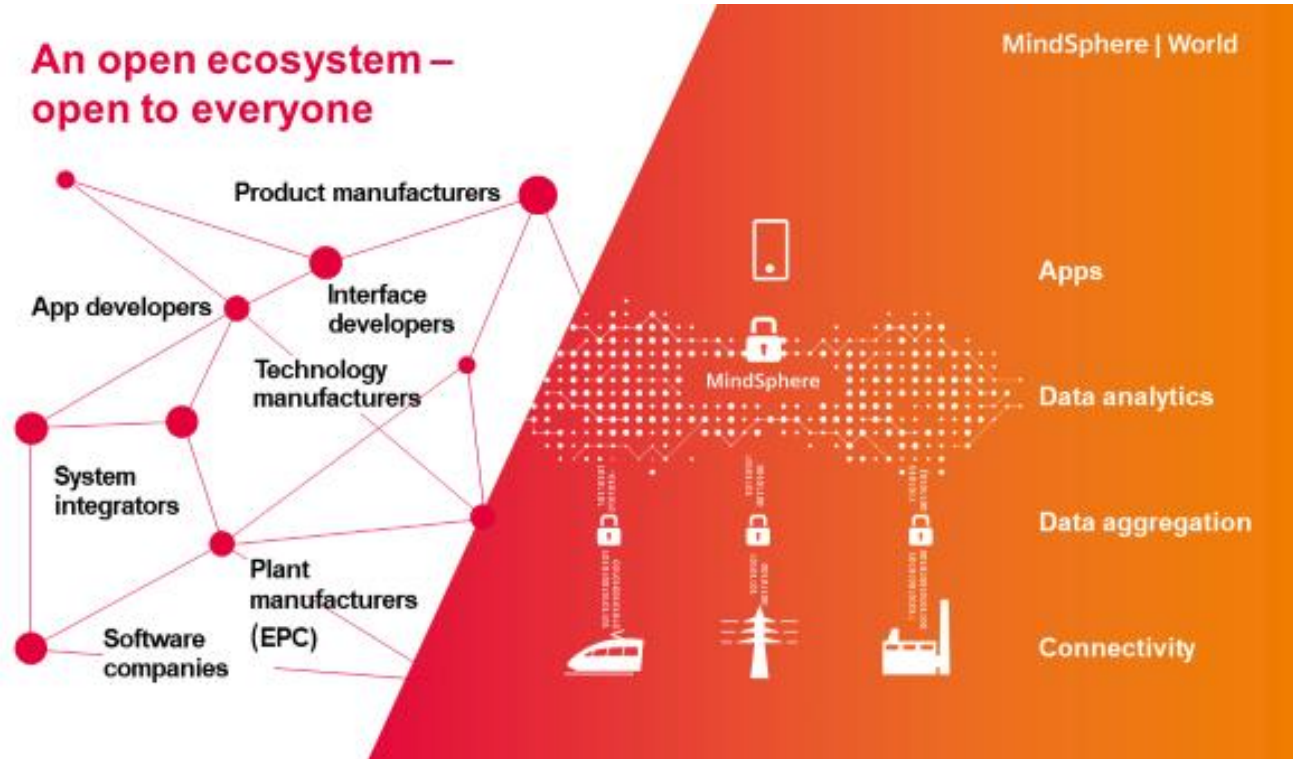
31 17 Jul 2017 17:59:38.206

Standard Scale [°C]

- axis_Z: 27.099997 °C
- axis_C1: 26.4995 °C
- axis_Y: 26.299997 °C

axis_B axis_C1 axis_C13 axis_C2 axis_X axis_Y axis_Z

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PAD 13
D97



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and future-
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digitalization
platform

CNC Shopfloor Management
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In Cloud



MindSphere

In Line



**SINUMERIK
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In Machine



SINUMERIK

**SINUMERIK
Edge**

Already **42** Software applications available





**Digitalization in
Machine Tool Manufacturing
Implement now!**

Pad. 13 Stand C50 - D63