

Welcome



Pushing Performance

Software solutions for fast commissioning in a RFID productive environment





- founded 1945
- Headquarter in Espelkamp, Germany
- 100 % privately owned by the Harting family

- Total turn over 2013/2014 EUR 530 Million
- More than 4000 employees
- 37 local subsidiaries
- 11 Productions plants
- 8 R&D Locations



HARTING product spectrum



Pushing Performance



**Industry-
connectors**



**Integrated
Backplanes**



3D-MID



**Shop
systems**

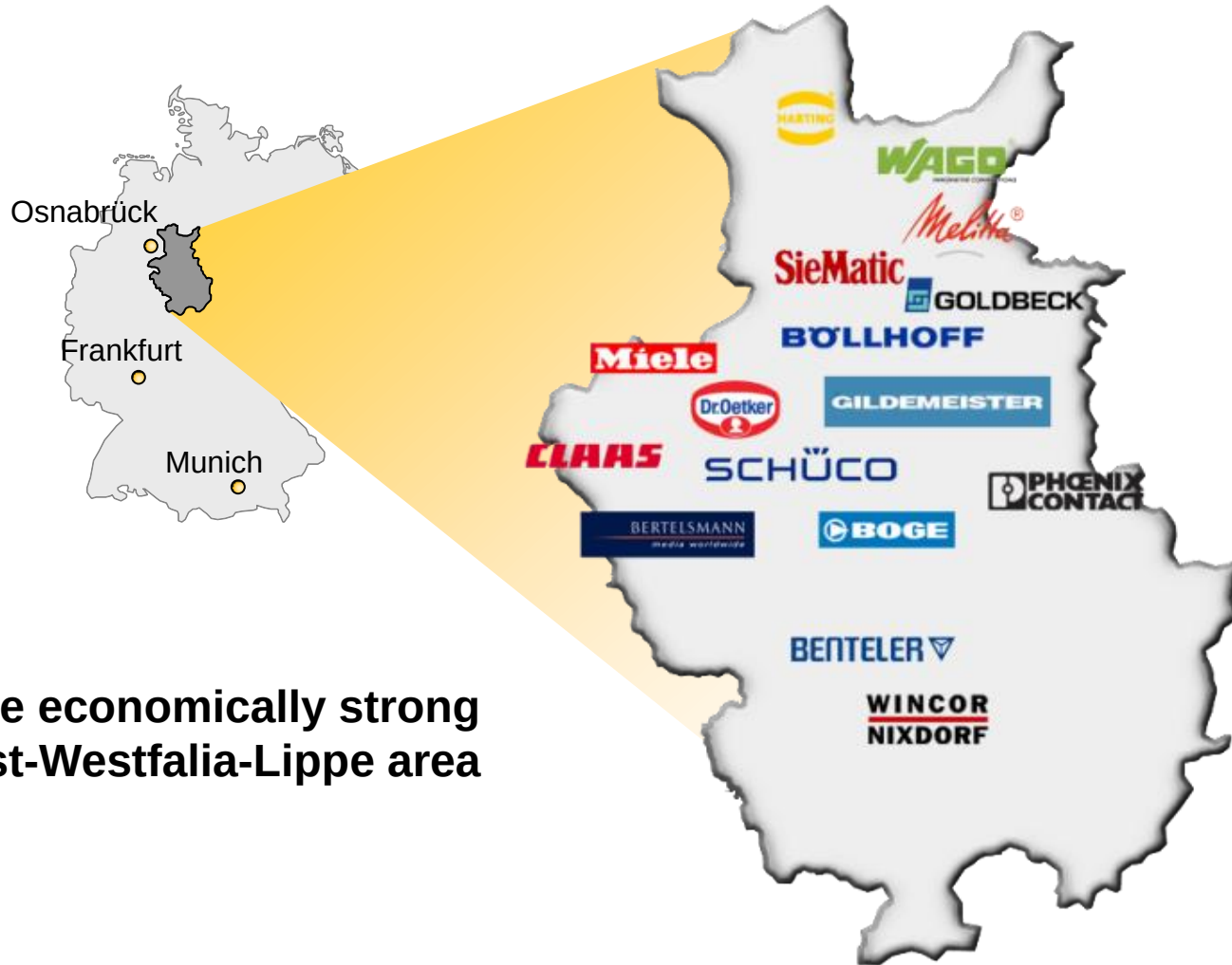


**Integrated
Industry**

HARTING in Germany



Pushing Performance



within the economically strong
East-Westphalia-Lippe area

Worldwide Production Plants



Pushing Performance

Germany



Espelkamp 1



Espelkamp 2



Espelkamp 3



Espelkamp 4



Espelkamp 5



Rahden

International



GB/Northampton



CH/Biel



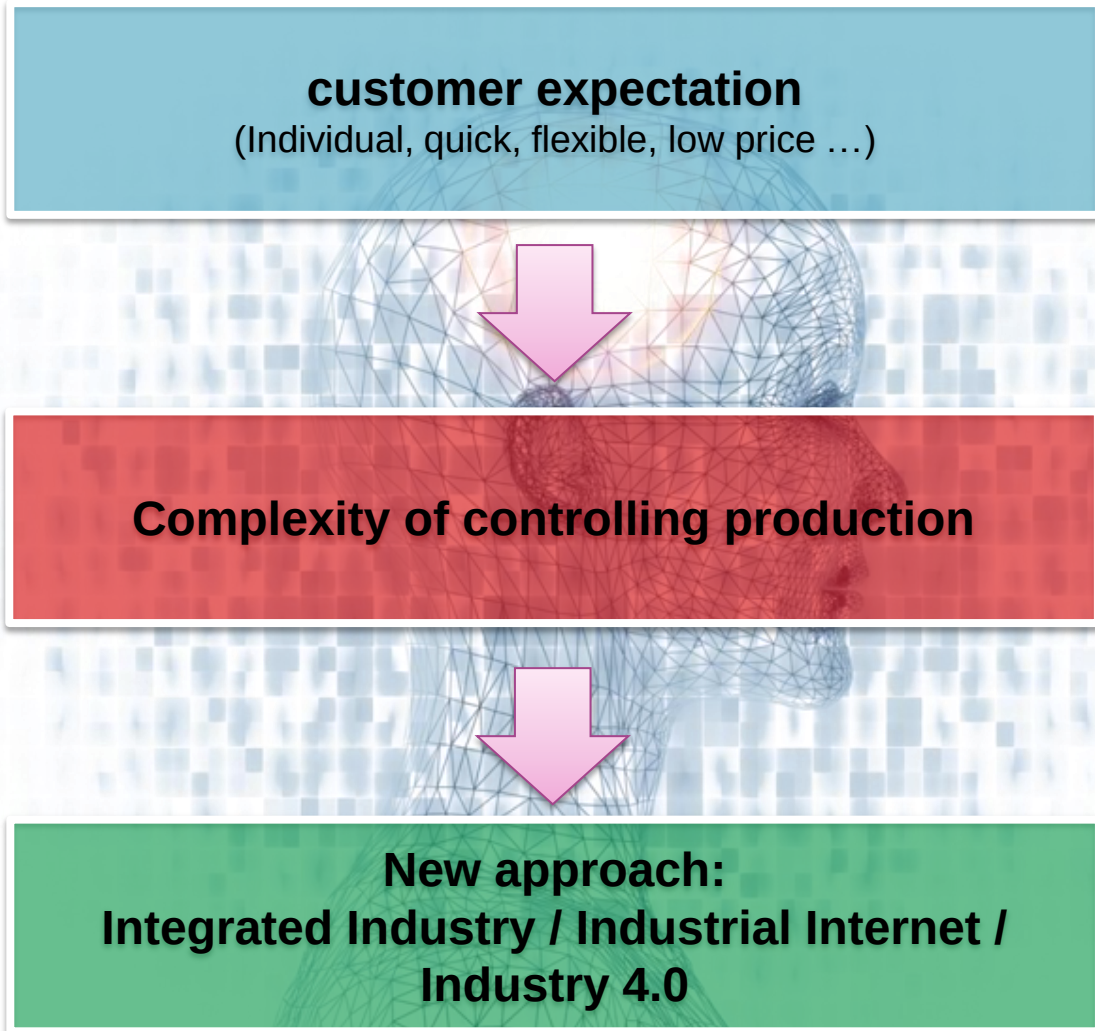
US/Elgin



CN/Zhuhai



RO/Sibiu

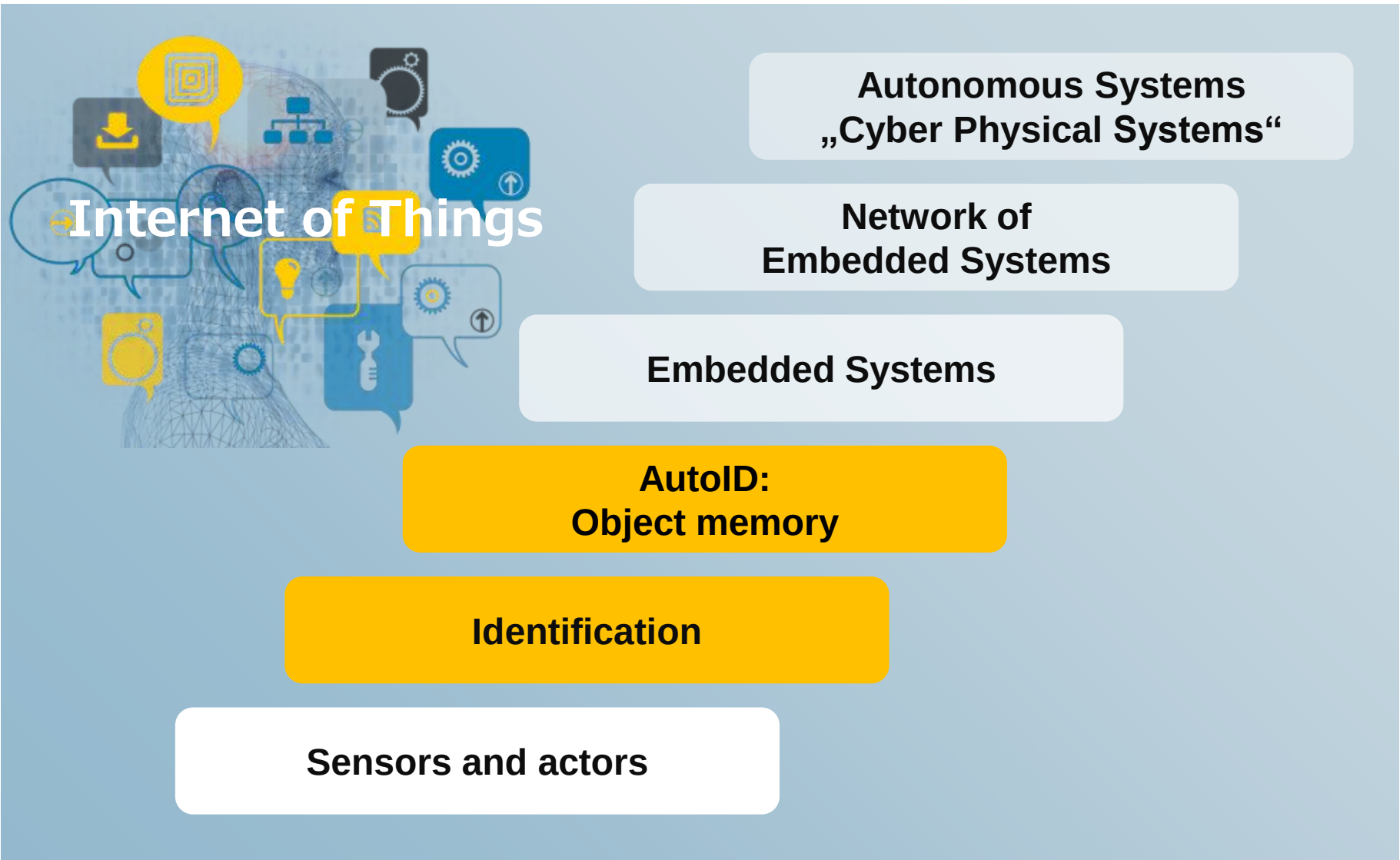
The diagram features a background image of a human head in profile, composed of a blue wireframe mesh. Overlaid on this are three horizontal rectangular boxes. The top box is light blue and contains the text 'customer expectation (Individual, quick, flexible, low price ...)'. A large pink arrow points downwards from this box to the middle box. The middle box is red and contains the text 'Complexity of controlling production'. Another large pink arrow points downwards from the middle box to the bottom box. The bottom box is green and contains the text 'New approach: Integrated Industry / Industrial Internet / Industry 4.0'.

customer expectation
(Individual, quick, flexible, low price ...)

Complexity of controlling production

**New approach:
Integrated Industry / Industrial Internet /
Industry 4.0**





What is RFID?



Pushing Performance

RF

Radio Frequency

UHF / 860 - 928 MHz

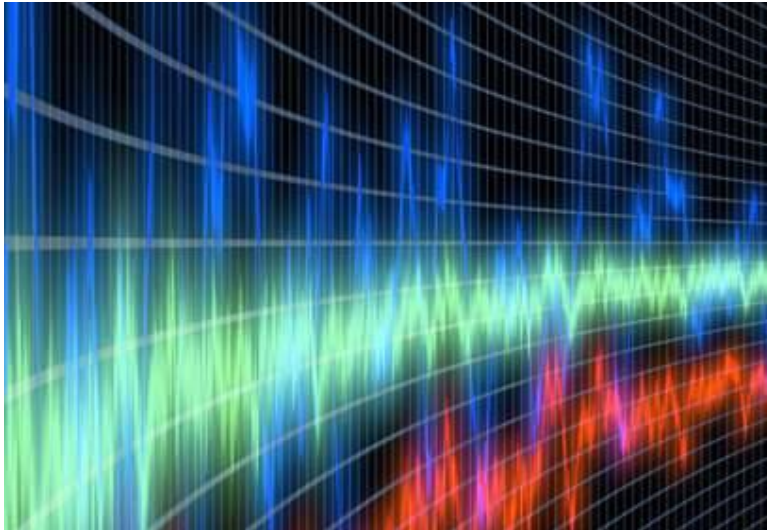
4 E.I.R.P = less than a cell phone

ID

Identification

Read Identification

Change / Write Identification



How to talk with a beer keg?



- Read range: few mm to 15 m
- Transponder on metal, in concrete, ...
- Highspeed: more than 200 km/h
- Extremely robust: 210°C, IP69K, acids, 100bar, ...



RFID Transponder for special applications



Pushing Performance



VT86

Identification of metal working pieces



SL89

Identification of metal containers and vehicles



CT89

Identification of concrete parts

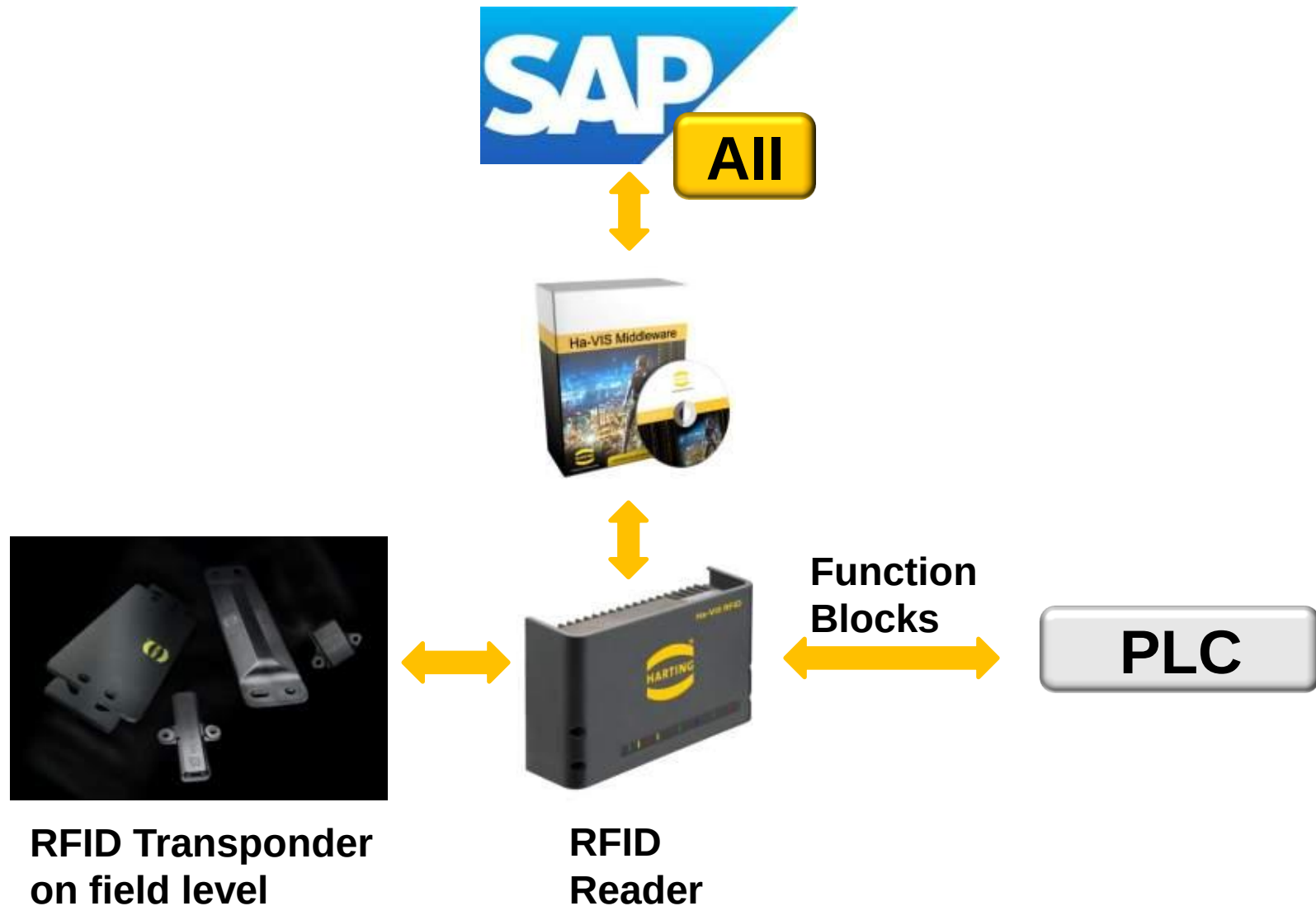
RFID Reader



Pushing Performance



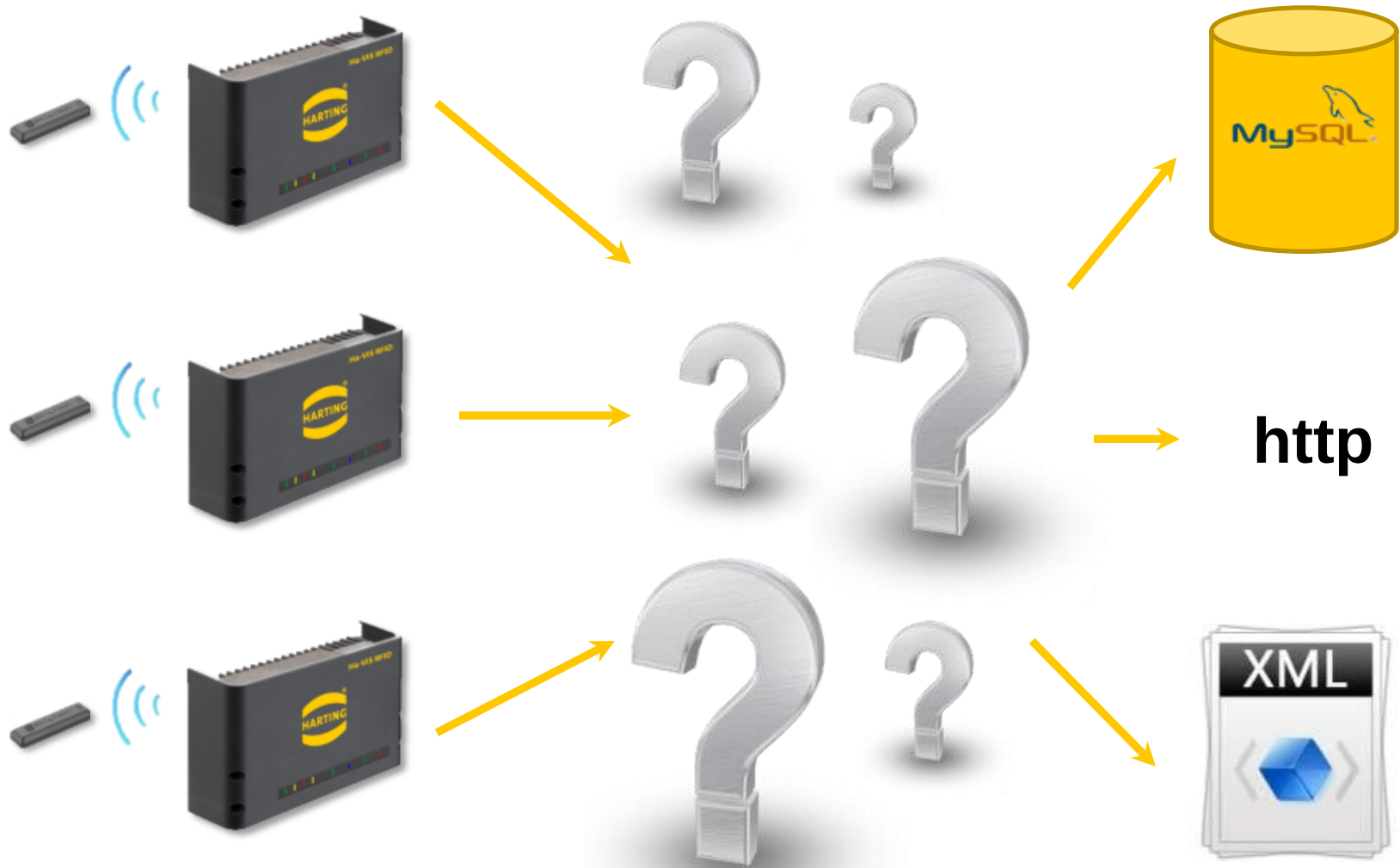
Software



Why Ha-VIS Middleware?



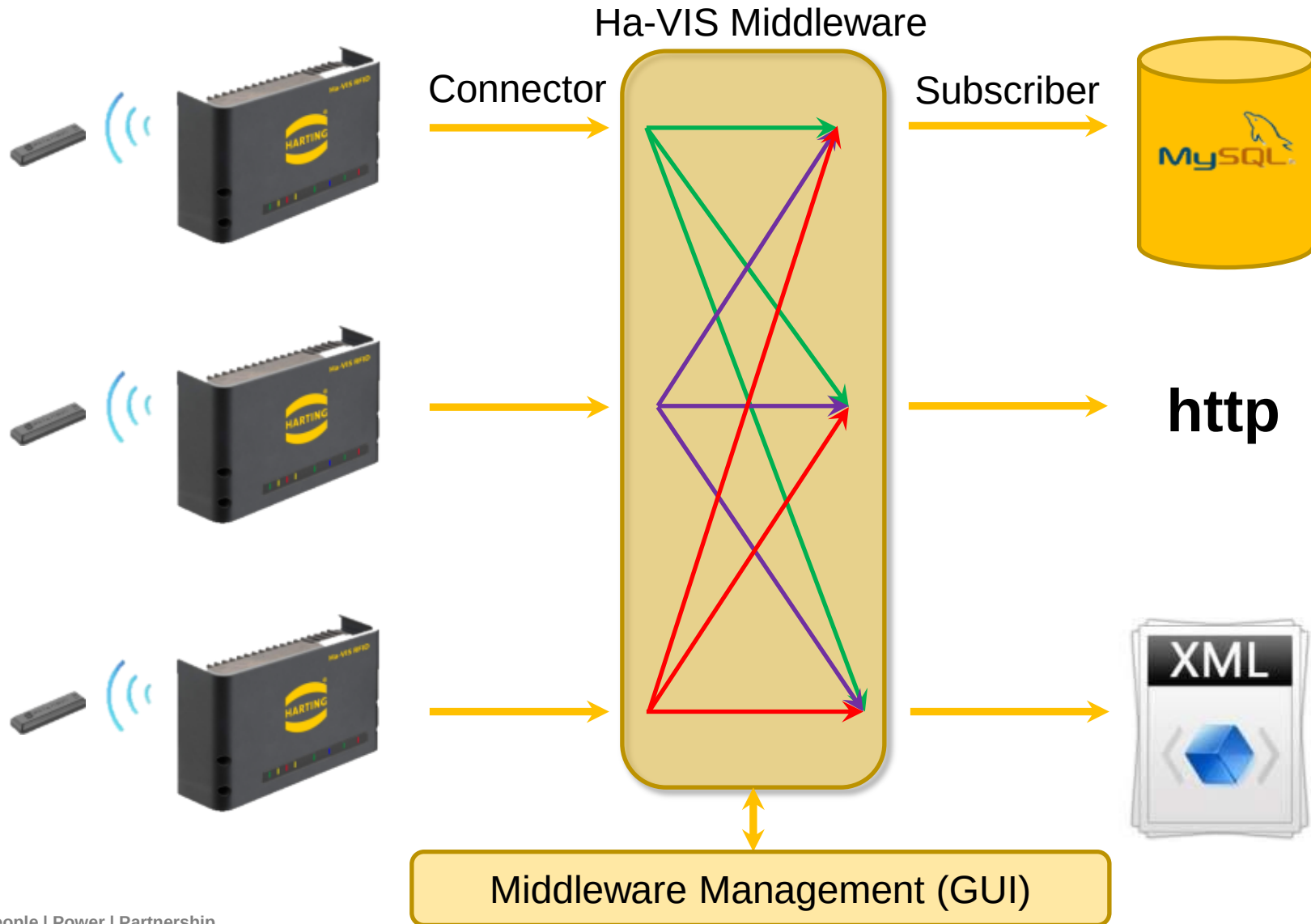
Pushing Performance



Why Ha-VIS Middleware?



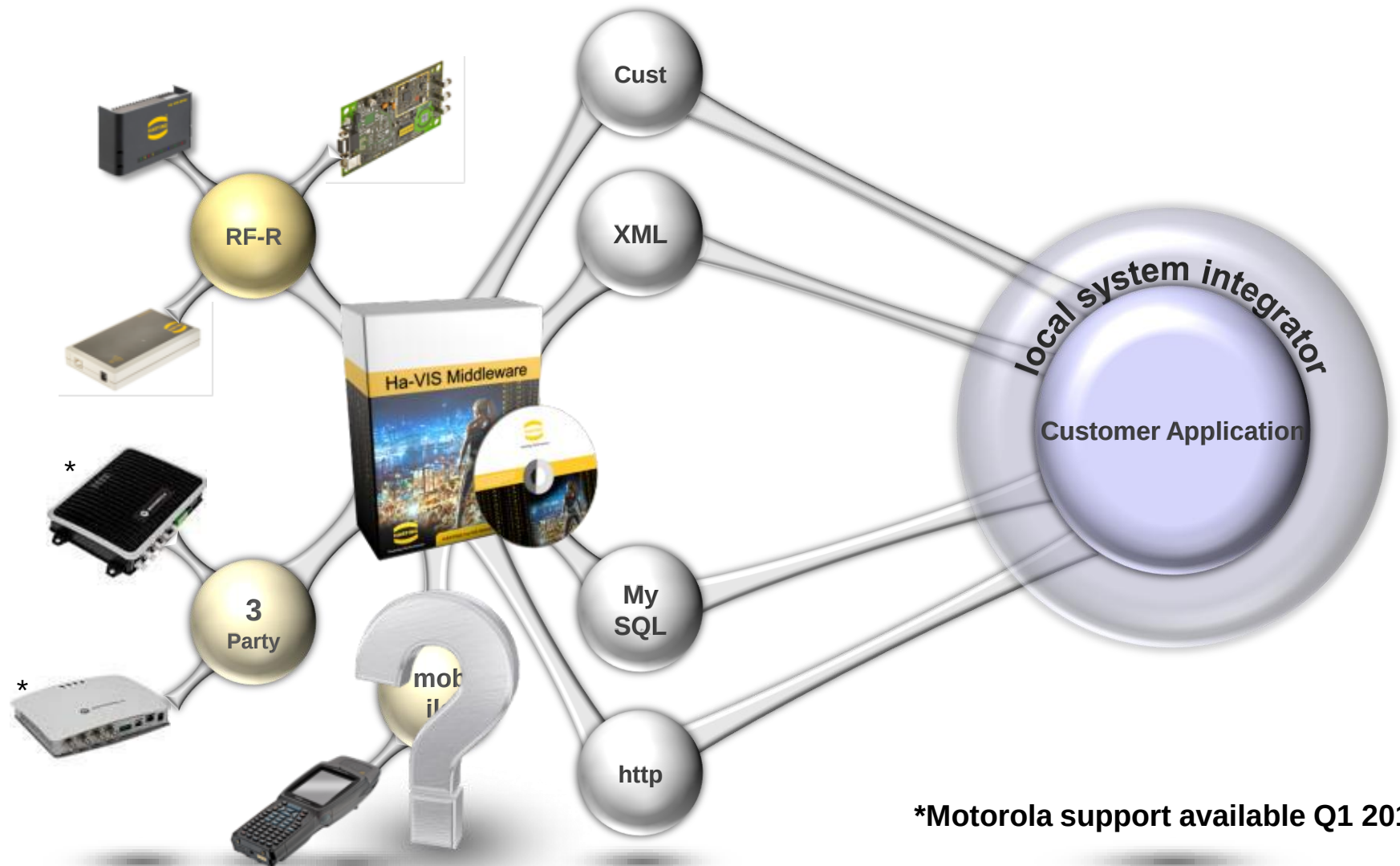
Pushing Performance



Ha-VIS Middleware



Pushing Performance



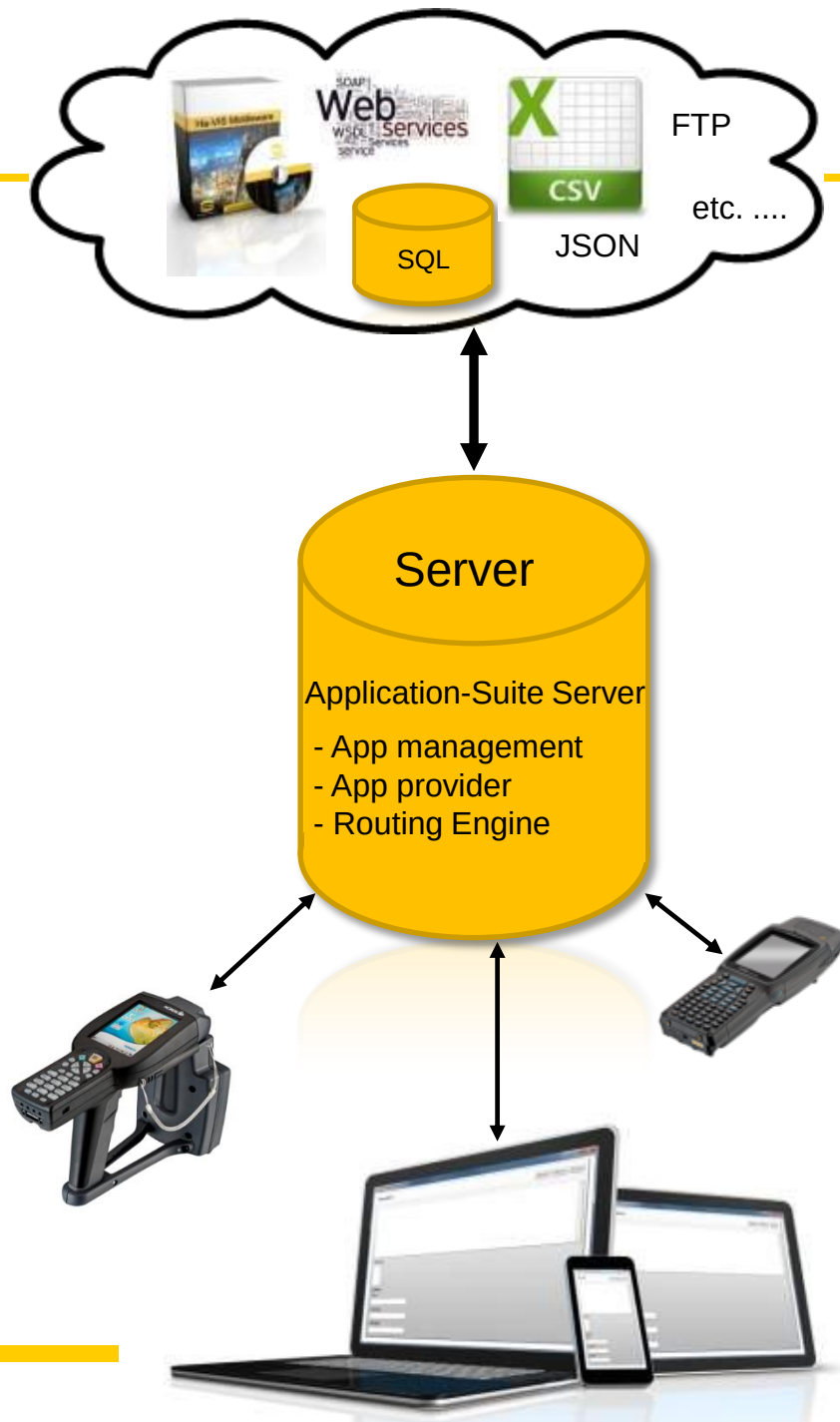
***Motorola support available Q1 2014**

Ha-VIS Application-Suite

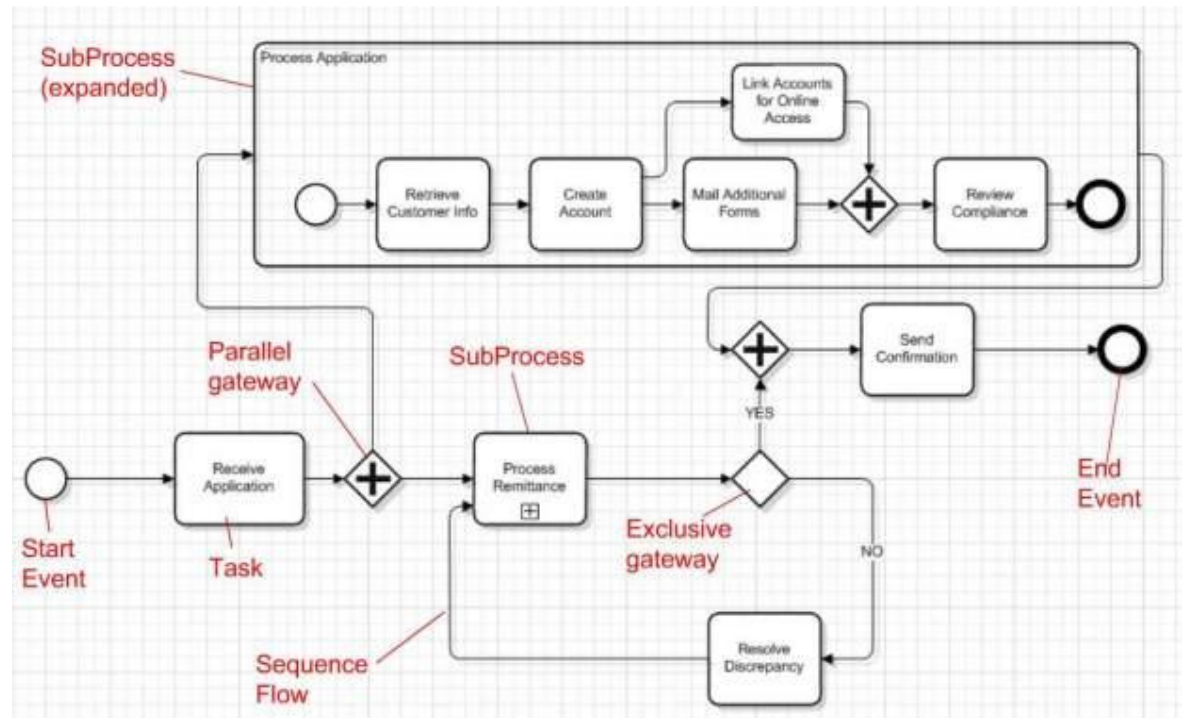


Pushing Performance

- mobile apps
- central management
- graphical process design



Technologies



Applications

Kanban-/Planing board: old vs new

Old: Kanban board



- ca. 2.500 manual Kanbans
- manual triggering of jobs

Old: Planing board



New: Software based



- Kanban system controlled
- Back-End-Systems fully integrated

Neu: Software controlled



Production papers



Pushing Performance

Laufkarte Druck: 29.12.2010 Seite: 001

Auftrag : 40625941 Werk: DB41 Disponent: Owe Priessmayer 071
 Material: 09300240301600 .02 Anbauegehäuse ABC:
 Zeichnungsnummer: A / MB 09300240301/40 Start: 01.12.2010
 Menge : 3.500,000 ST Ende : 01.12.2010

40625941

09300240301600

02

Vorg	Polge	Ans	Post	Werk	Sten	Lieftermin	Bis
0020	0	37270000	415054	DB41	01.12.2010	297,50 MIN	
Tr:		120,000 MIN			4,700 MIN	8,500 MIN	

8-fach druckgießen / autom. Stanzentgraten

Nickmeldschein Druck: 29.12.2010 Seite: 001

Auftrag : 40625941 Werk: DB41 Disponent: Owe Priessmayer 071
 Material: 09300240301600 .02 Anbauegehäuse ABC:
 Menge : 3.500,000 ST Start: 01.12.2010
 Ende : 01.12.2010

09300240301600 406259410002500000*

Vorg	Polge	Ans	Post	Werk	Sten	Lieftermin	Bis
0020	0	37270000	415054	DB41	01.12.2010	297,50 MIN	
Tr:		120,000 MIN			4,700 MIN	8,500 MIN	

8-fach druckgießen / autom. Stanzentgraten

Meilensteinmeldung

0005145644

Voll: _____ Teil: _____

Liefermenge : Datum: Name:

Anbruchmenge: Anrechnung : i

Produktionsstart

Status 2

093002403016001 HARTING

Anbauegehäuse ohne Zapfen

PVB: Druckguss 8074 / 5

Menge: Status 1: 1800 wart

Gebinde: Werkzeug: SB G 0930-0203 Stellplatz:

Lager: Status 5: 3003 WE buchen



Saving of 90.000 sheets of paper per year!

eKanban in real life

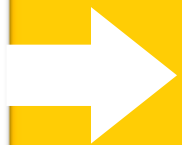


Pushing Performance



**time saving 3 min
per booking**

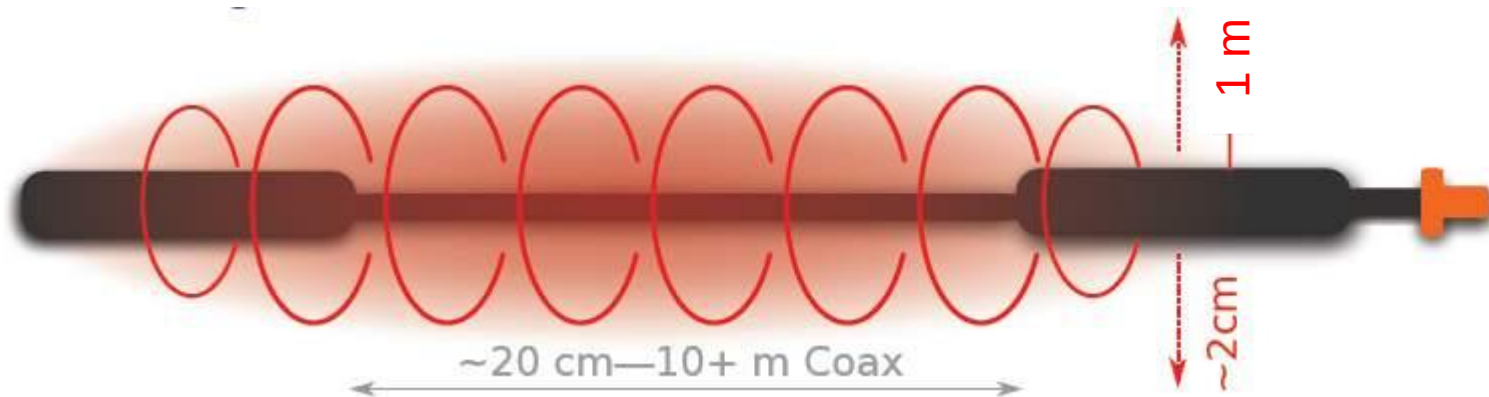
■ Development	140 T€
■ Running costs	25 T€ / year
■ Savings Handling costs	140 T€ / year
■ More advantages	20 T€ / year
■ Savings paper	90.000 sheets / year
= Savings after 2 years	135 T€ / year



Return on Invest < 2 years!

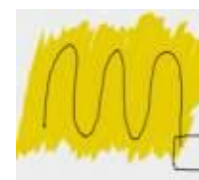
Use coax cable as antenna

- **LOCFIELD®** — The antenna generates a localized electromagnetic field
- The electromagnetic field follows the antenna cable



Smart work bench

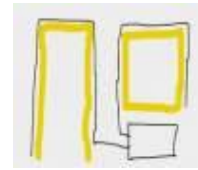
Smart shelf



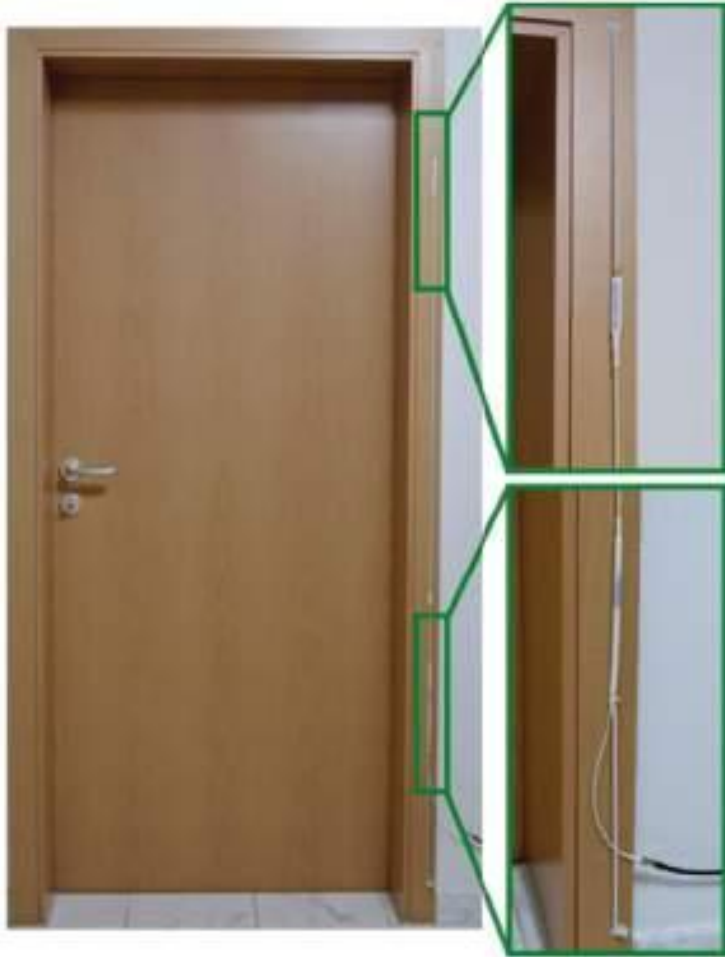
- Read objects on table
- Read objects on shelves
- Read range 2 cm to 250 cm
- Field-free zones are possible



Tracking & Tracing



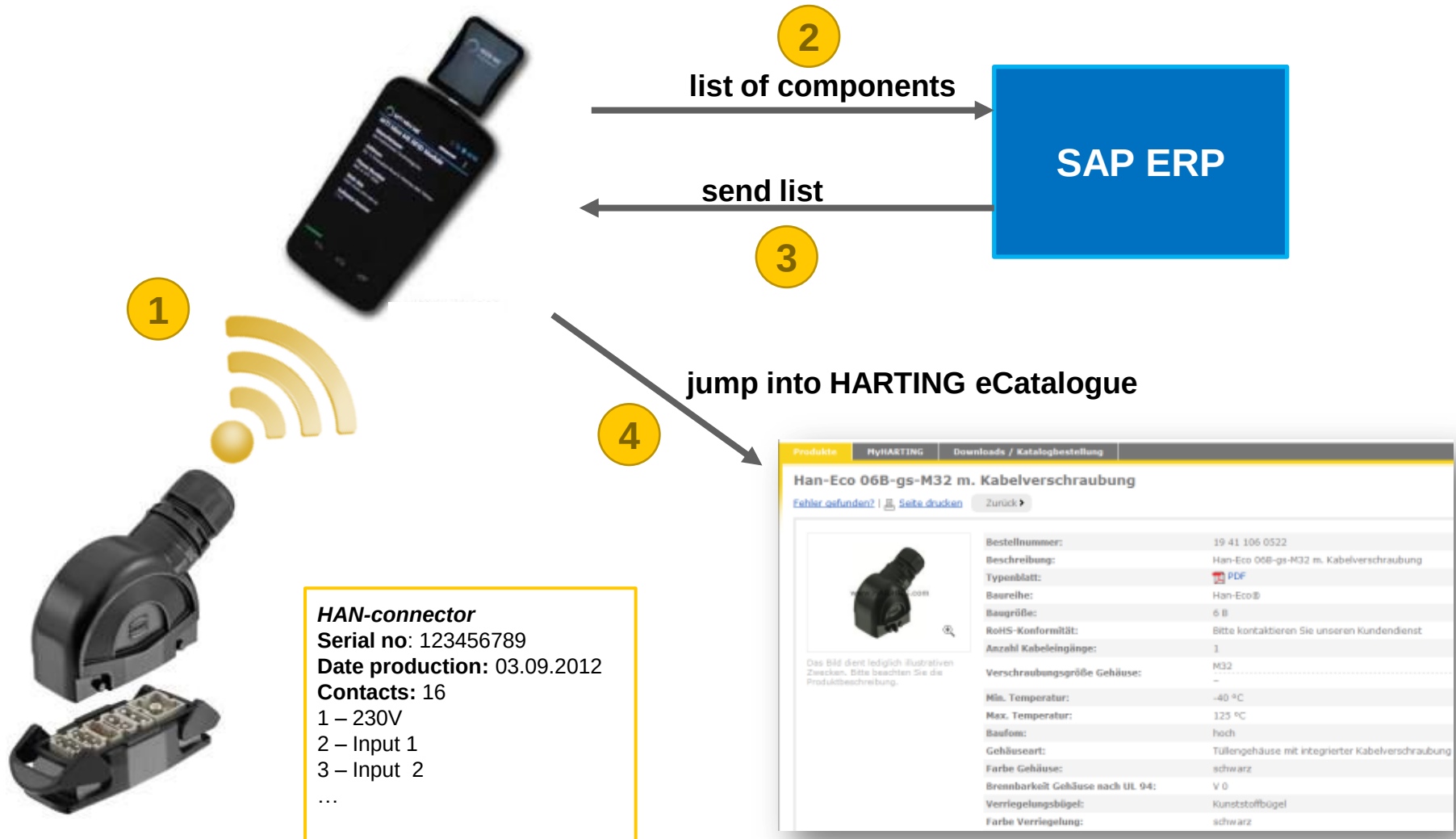
Pushing Performance



Mobile RFID scenario: product with memory



Pushing Performance



Improve your maintenance : Ha-VIS Application Suite

- guided process
- Platform independent mobile Apps
- From field level to ERP

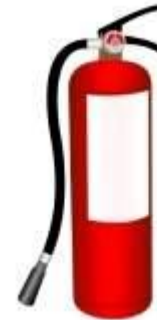


Tracking of safety relevant parts

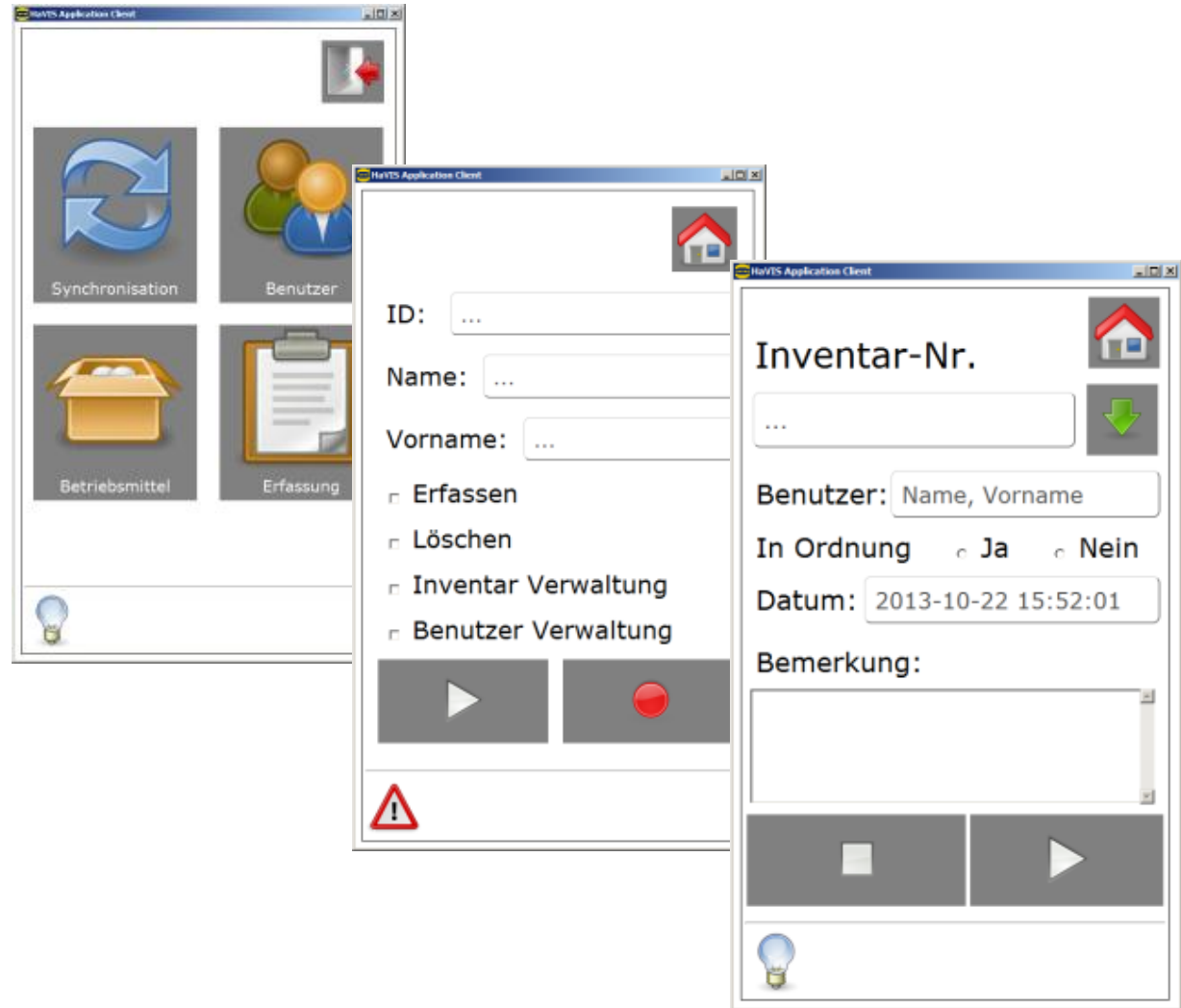
Mandatory documentation



Pushing Performance



Tracking and documentation



Partners and Technologies



Pushing Performance



SIEMENS

STADLER



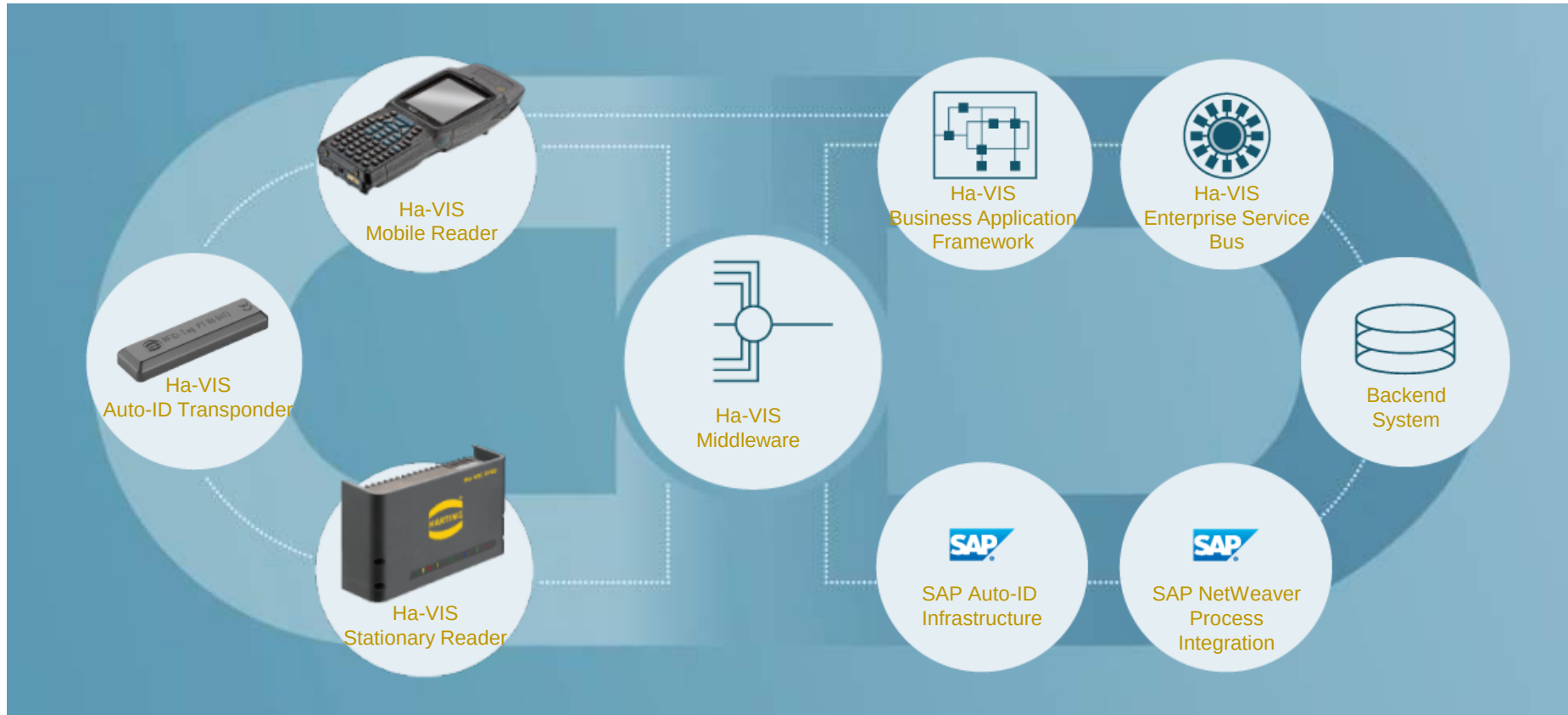
MOTOROLA



HARTING solutions for Integrated Industry



Pushing Performance



*thank you
for your attention*



Center of excellence Research

Fleximon – flexible mounting of parts



Pushing Performance

- Modulare machines
- 1 piece flow
- Self-organizing

