Heidelberg goes digital.
**One year "Heidelberg Subscription"
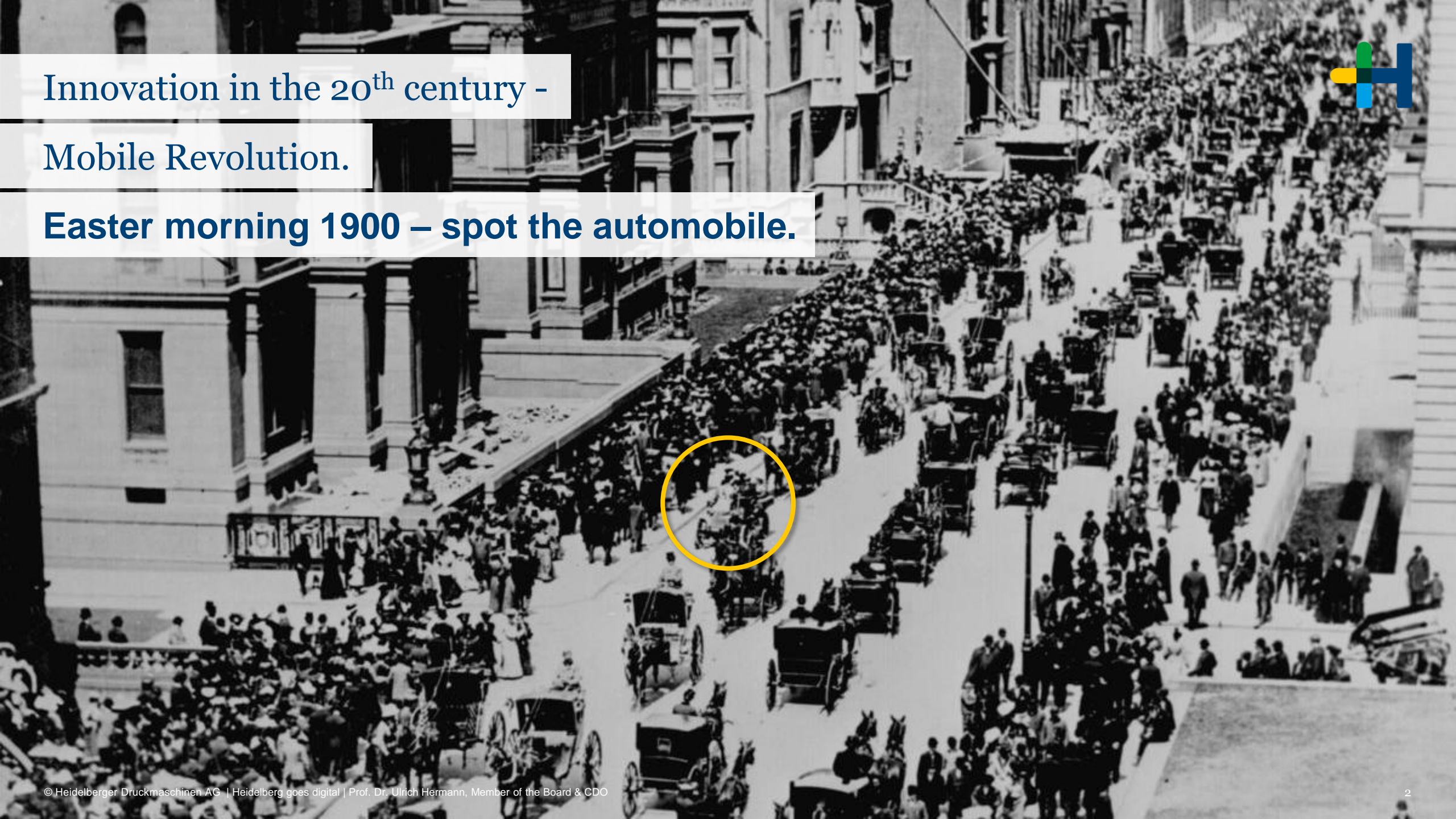at Klampfer Group, Austria.**

Press Event
Prof. Dr. Ulrich Hermann, CDO | St. Ruprecht, September 19, 2019

HEIDELBERG

Innovation in the 20th century -

Mobile Revolution.

Easter morning 1900 – spot the automobile.

Innovation in the 20ᵗʰ century - Mobile Revolution.

Easter morning 1913 – spot the horse.

Digital Innovation -

The power of Digital Business Models.

New York, 7th Avenue 2012.

Digital Innovation –

The power of Digital Business Models.

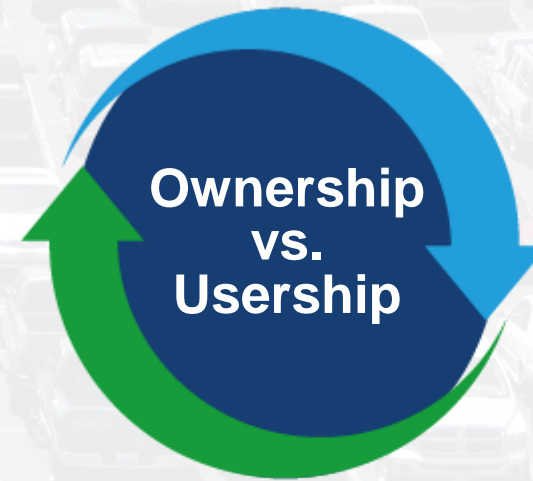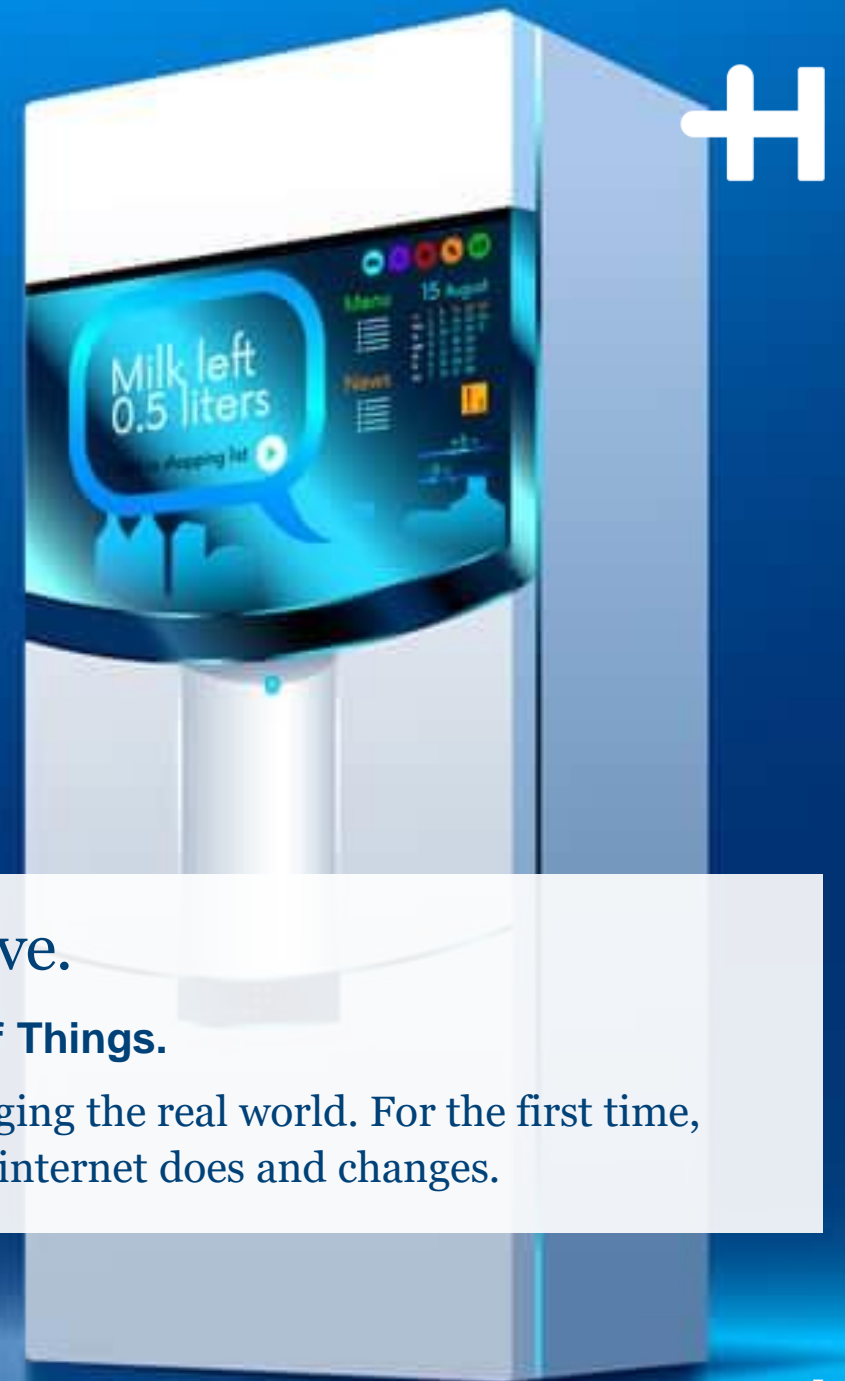**New York, 7th Avenue 2017.**

The Availability Dilemma.

Ownership vs. Usership

The Third Wave.

Digital Economy of Things.

The internet is changing the real world. For the first time, people see what the internet does and changes.

Digital Economy of Things.
From "Ownership" to "Usership".

Printing.
Transition from "Black Art" to industrial printing.

From the small craft business ...

... to an industrial company.

Print media industry 4.0.

→ Highly flexible production of mostly individualized print products.

→ Massive pressure on production costs, flexibility and delivery times.

→ Print shop embedded in a digital supply chain with customers and suppliers.

→ Provision of additional services, e.g. dispatch, multimedia marketing.

→ 24 x 7 hour operation.

→ Working in and for a global market.

Industrial printing means
OPERATIONAL EXCELLENCE

The average OEE doubles in 10 years.

OEE

100%

Reduced average production speed

Maintenance and technical availability

Minimum 2 min. makeready per job

Realistic Performance Border

Expected productivity range until 2026

Current achieved productivity range

0%

500   1.000   2.000   4.000   8.000   16.000   32.000

Average run length
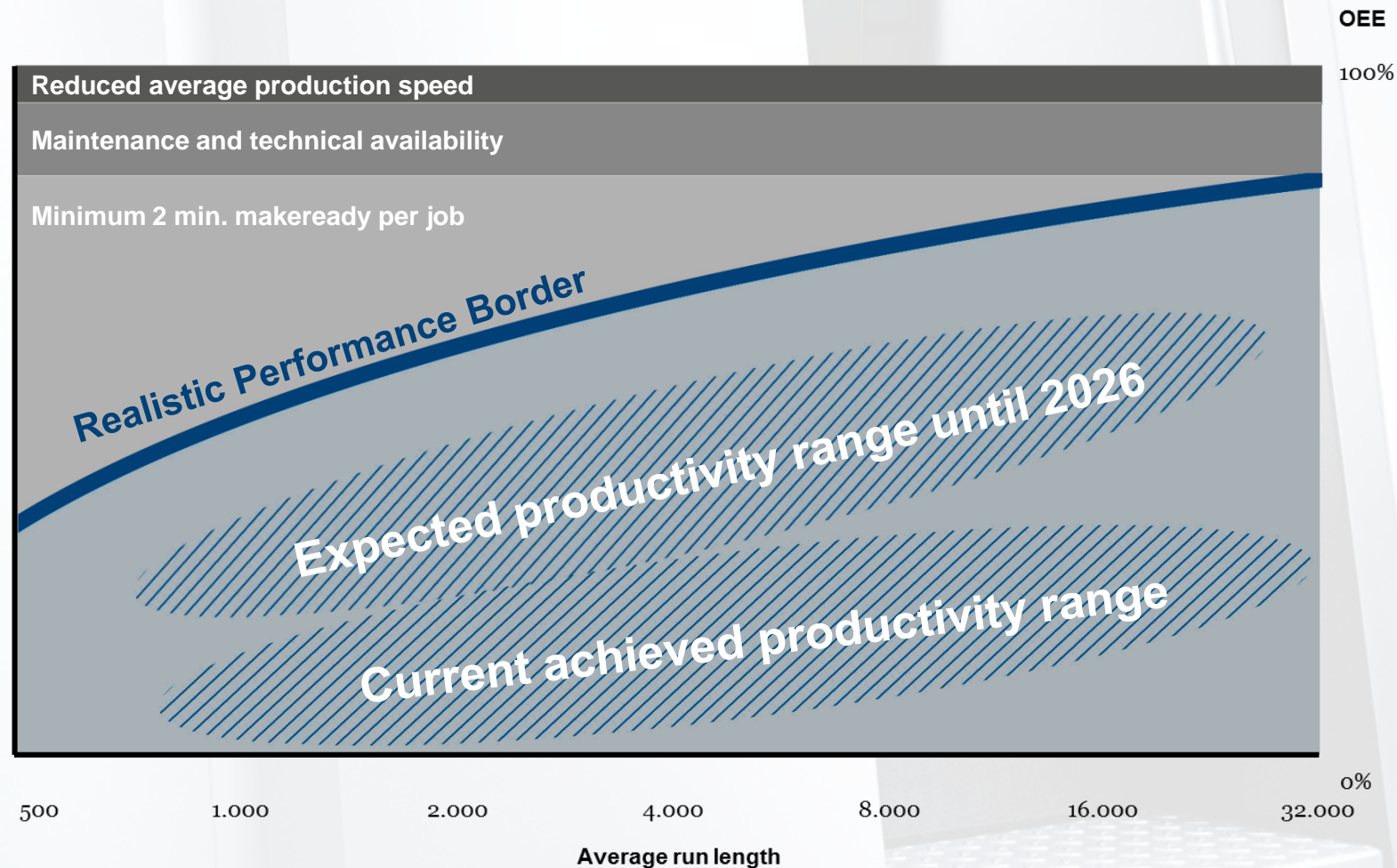
Our agenda is clear. **Heidelberg goes digital.**

Heidelberg goes digital.
Big Data provides the basis for digital revenue models.

Transactional business model → **Pay per unit**

Ecommerce → **Heidelberg ecosystem**

Subscription model → **Pay per print**
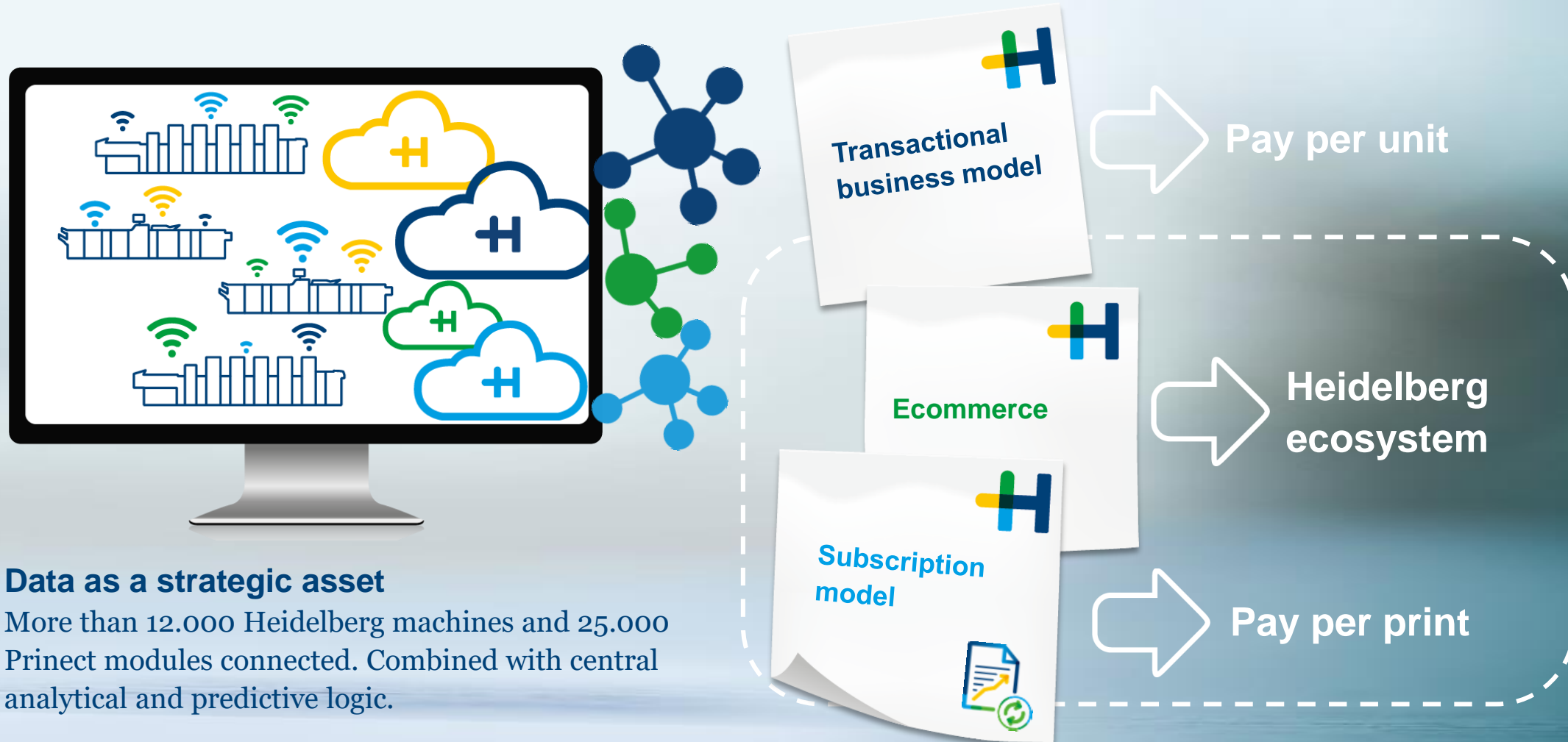
Data as a strategic asset

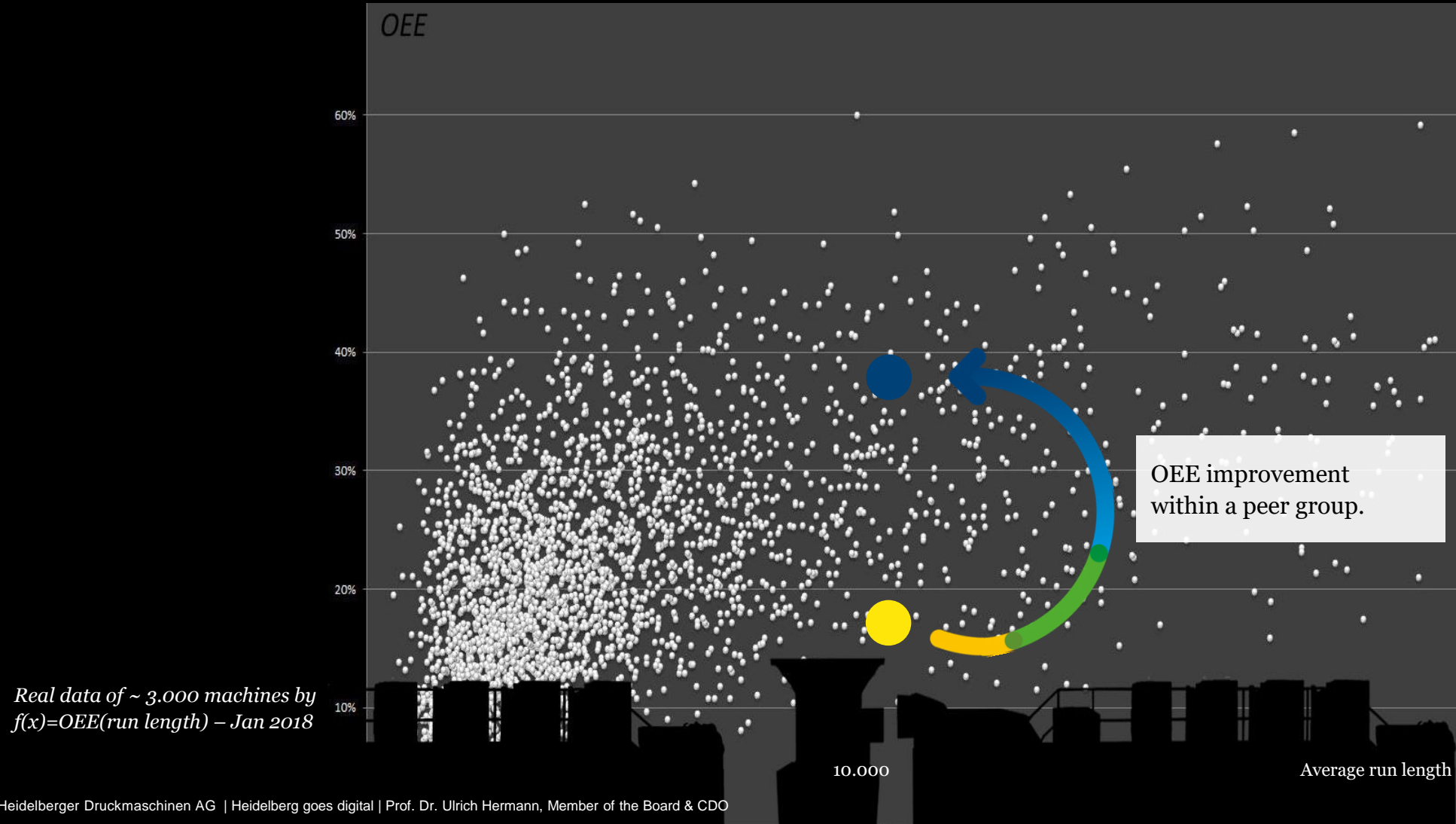More than 12.000 Heidelberg machines and 25.000 Prinect modules connected. Combined with central analytical and predictive logic.

The Sheetfed Milky Way.
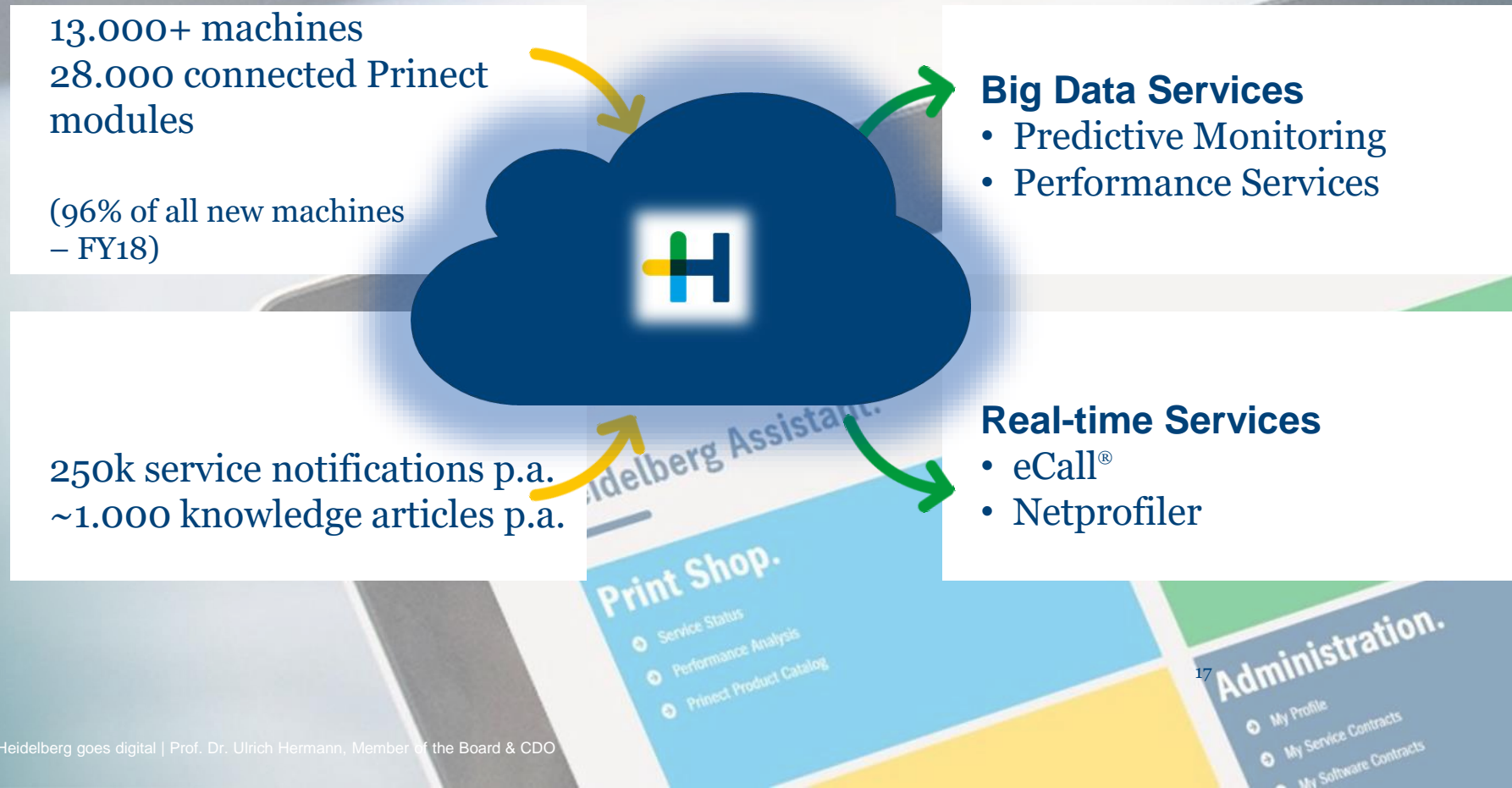## Unique by network effect.

OEE

60%

50%

40%

30%

20%

10%

OEE improvement
within a peer group.

Real data of ~ 3.000 machines by
f(x)=OEE(run length) – Jan 2018

10.000

Average run length

Smart Printshop.
Autonomous print production.

Heidelberg Cloud.
IoT as a key – data based services.

13.000+ machines
28.000 connected Prinect
modules

(96% of all new machines
– FY18)

Big Data Services
- Predictive Monitoring
- Performance Services

250k service notifications p.a.
~1.000 knowledge articles p.a.

Real-time Services
- eCall®
- Netprofiler

Print Shop.
- Service Status
- Performance Analysis
- Prinect Product Catalog

Administration.
- My Profile
- My Service Contracts
- My Software Contracts

17

Heidelberg Cloud.
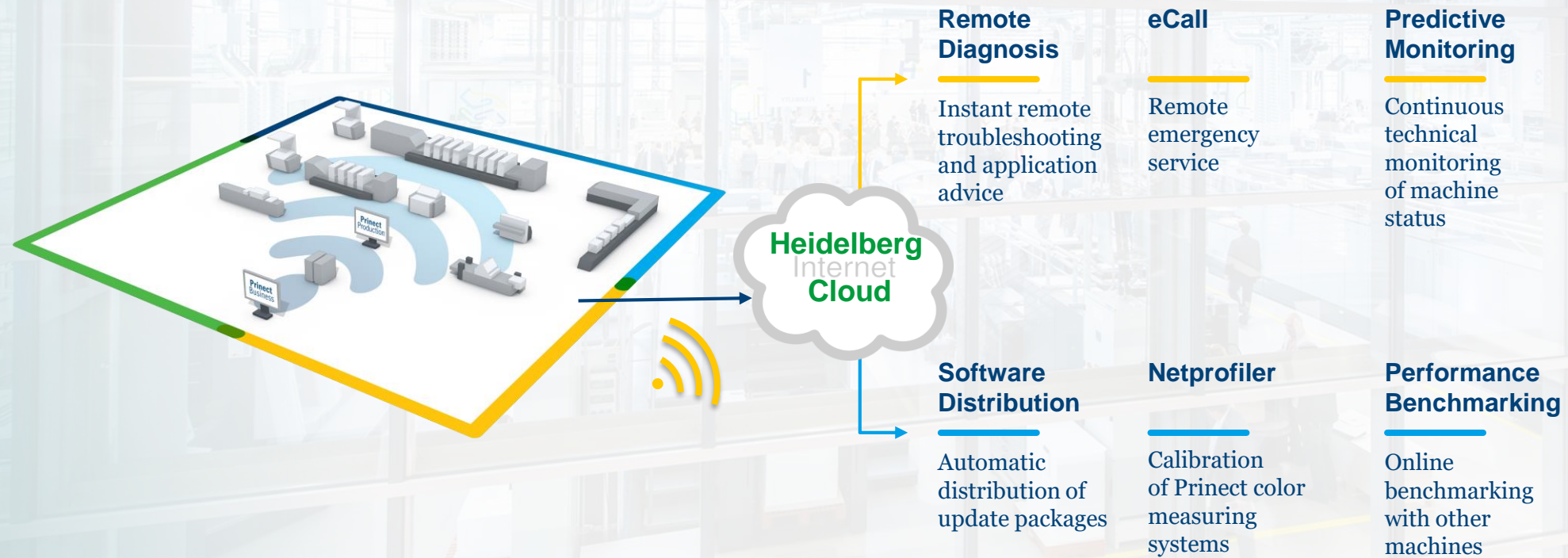## A day in our Service Center.

Monthly business performance.

→ 4.000+ Remote Sessions tor service interventions

→ 4.000.000 data sets from sensors and software modules

→ 1 TB data in log files
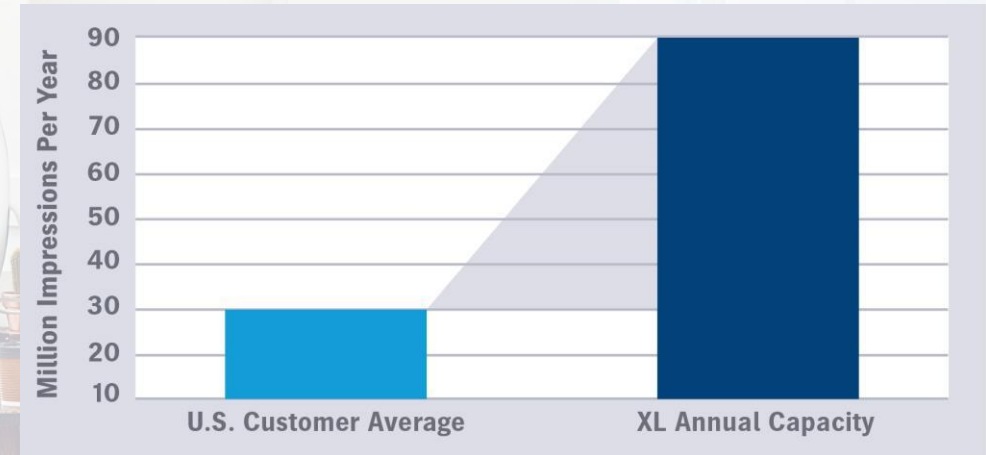
→ 150.000 software update requests

Big Data.

→ 30.000.000+ Print jobs as benchmark database for the Print Media Industry

Heidelberg Remote Services.
An innovation platform.

Heidelberg Internet **Cloud**

Remote Diagnosis

Instant remote troubleshooting and application advice

eCall

Remote emergency service

Predictive Monitoring

Continuous technical monitoring of machine status

Software Distribution

Automatic distribution of update packages

Netprofiler

Calibration of Prinect color measuring systems

Performance Benchmarking

Online benchmarking with other machines

Lifecycle oriented business model.
#Heidelberg Subscription.

Prinect

Consult-ing

Equip-ment

Increase your performance.
The Heidelberg portfolio.

Training

Consum-ables

Service

Million Impressions Per Year

90
80
70
60
50
40
30
20
10

U.S. Customer Average

XL Annual Capacity

For more details visit
www.heidelberg-subscription.com/

Customer feedback Lensingdruck: sustainable performance improvement was our motivation.

Reasons for the Heidelberg subscription model:

→ Our company had to skip a generation of machines.

→ Heidelberg's Performance Plus has made this leap more comfortable for us.

→ Monthly evaluation and benchmarks show us our potential for improvement.

→ Staff training has significantly increased our output.

→ We pay only, what we consume.

Robert Dembinski, Managing Director

Customer feedback Lensingdruck: the model links our and Heidelberg's success.

Advantages of the Heidelberg subscription model:

→ Monthly billing is based on your own printing volume.

→ Expenses for the purchase of consumables are eliminated.

→ Order costing is considerably simplified.

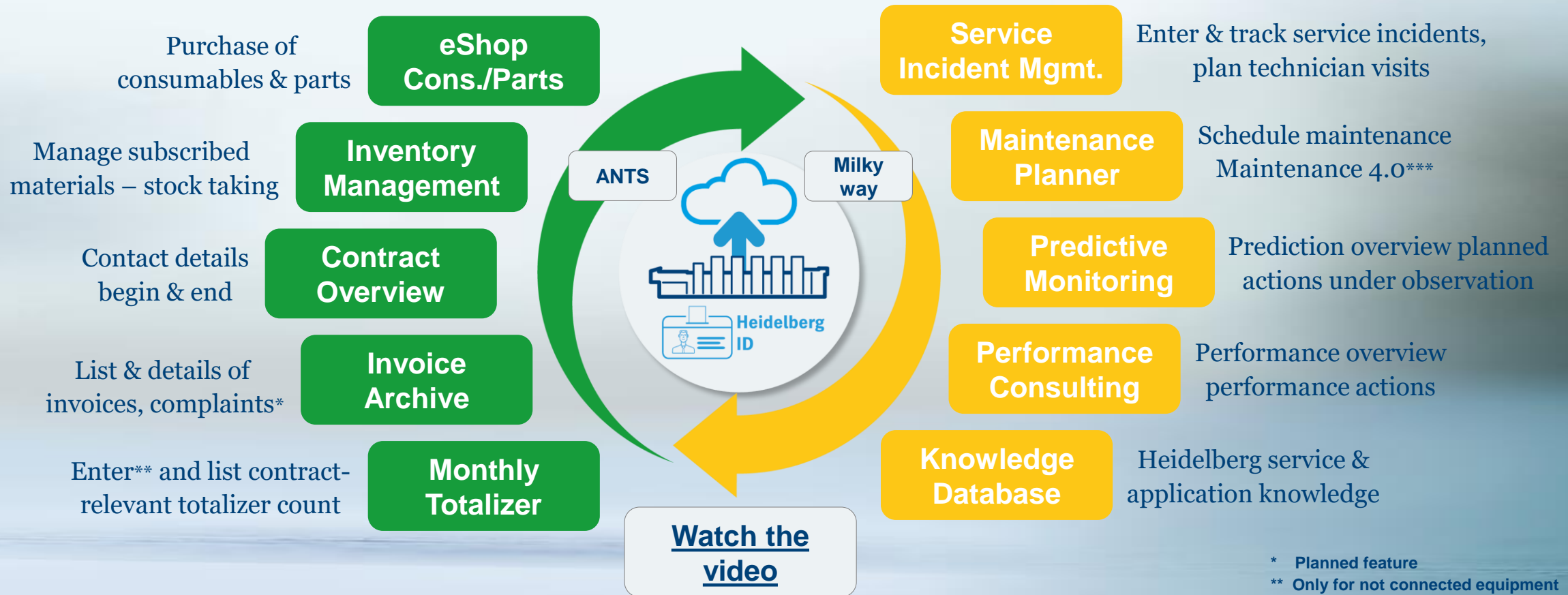→ Systematically improving the handling of smaller run lengths and thus following the trend in our market.
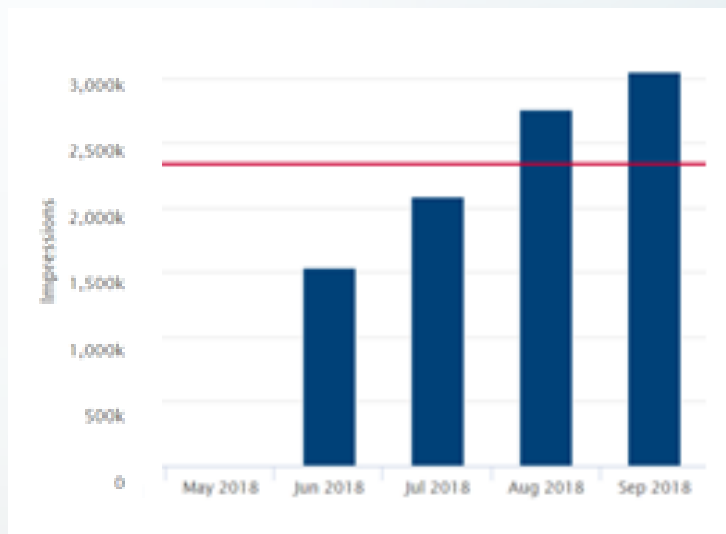
Heidelberg ID.
Secure, personal access to your data.

The Heidelberg ID identifies a natural person (contact) with a specific role in the print shop.

The Heidelberg ID is valid for authentication and authorization for all Heidelberg digital applications.
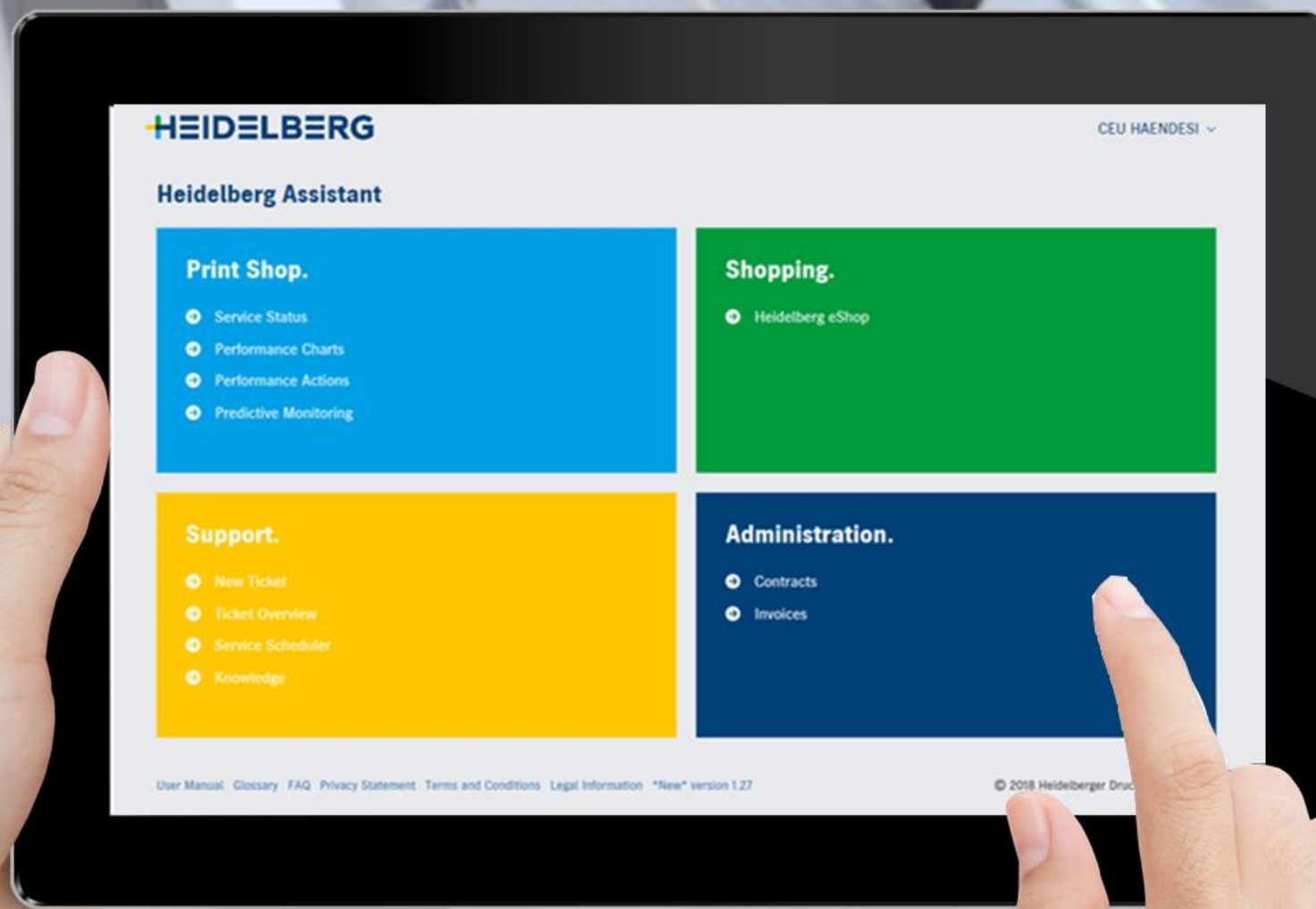
Heidelberg Assistant.
Heidelberg´s Digital Collaboration Platform.

Purchase of consumables & parts — **eShop Cons./Parts**

Manage subscribed materials – stock taking — **Inventory Management**

Contact details begin & end — **Contract Overview**

List & details of invoices, complaints* — **Invoice Archive**

Enter** and list contract-relevant totalizer count — **Monthly Totalizer**

ANTS

Milky way

Heidelberg ID

Watch the video

Service Incident Mgmt. — Enter & track service incidents, plan technician visits

Maintenance Planner — Schedule maintenance Maintenance 4.0***

Predictive Monitoring — Prediction overview planned actions under observation

Performance Consulting — Performance overview performance actions

Knowledge Database — Heidelberg service & application knowledge

* **Planned feature**
** **Only for not connected equipment**
*** **If available**

Heidelberg Assistant.
The whole print shop at a glance.

Heidelberg Assistant.
Predictive Monitoring.

→ To increase machine availability through error avoidance.

→ Optimum maintenance measures at the right time.

Heidelberg Assistant.
Predictive Monitoring.

→ To increase machine availability through error avoidance.

→ Optimum maintenance measures at the right time.

> Predictive Meldungen

> Erforderliche Wartungsmaßnahmen

> Themen unter Beobachtung

∨ Predictive Meldungen

| Ticketnummer	Maschine / Software	Erstellt am	Zusammenfassung	Fehlerort	Predictive Status	Priorität
005504187974	XL 106-6+L (FS001730)	16.1.2018 09:00	PCALL:PCALL E/M_PU2_PU5_Plate Cylinder D			Nächster Serviceeinsatz
005504198177	XL 106-6+L (FS001730)	26.1.2018 20:31	PCALL:E_PU1_Sheet detected above feed cy			Nächster Serviceeinsatz
005504198203	XL 106-6+L (FS001730)	26.1.2018 20:41	PCALL: E_Press_Maschine doesn't work sta			Nächster Serviceeinsatz
005504201908	XL 106-6+L (FS001730)	31.1.2018 21:17	PCALL: E/M_PU3_Malfunction: Fan sheet gu			Nächster Serviceeinsatz
005504204244	XL 106-6+L (FS001730)	3.2.2018 17:47	PCALL:E_PU1_Malfunction: LPR sheet guide			Nächster Serviceeinsatz
005504230714	XL 106-6+L (FS001730)	8.3.2018 14:03	PCALL:M_Del_Swing-away rear edge stops c			Nächster Serviceeinsatz

Heidelberg Assistant.
Performance Service.

→ Performance overview & consulting.

→ Recommended actions = interactive task list.

Heidelberg Assistant.
Shopping – suitable for the machine.

→ Direct access from the equipment to a pre-selected list of suitable consumables in the eShop.

→ Spare parts clarification and ordering.
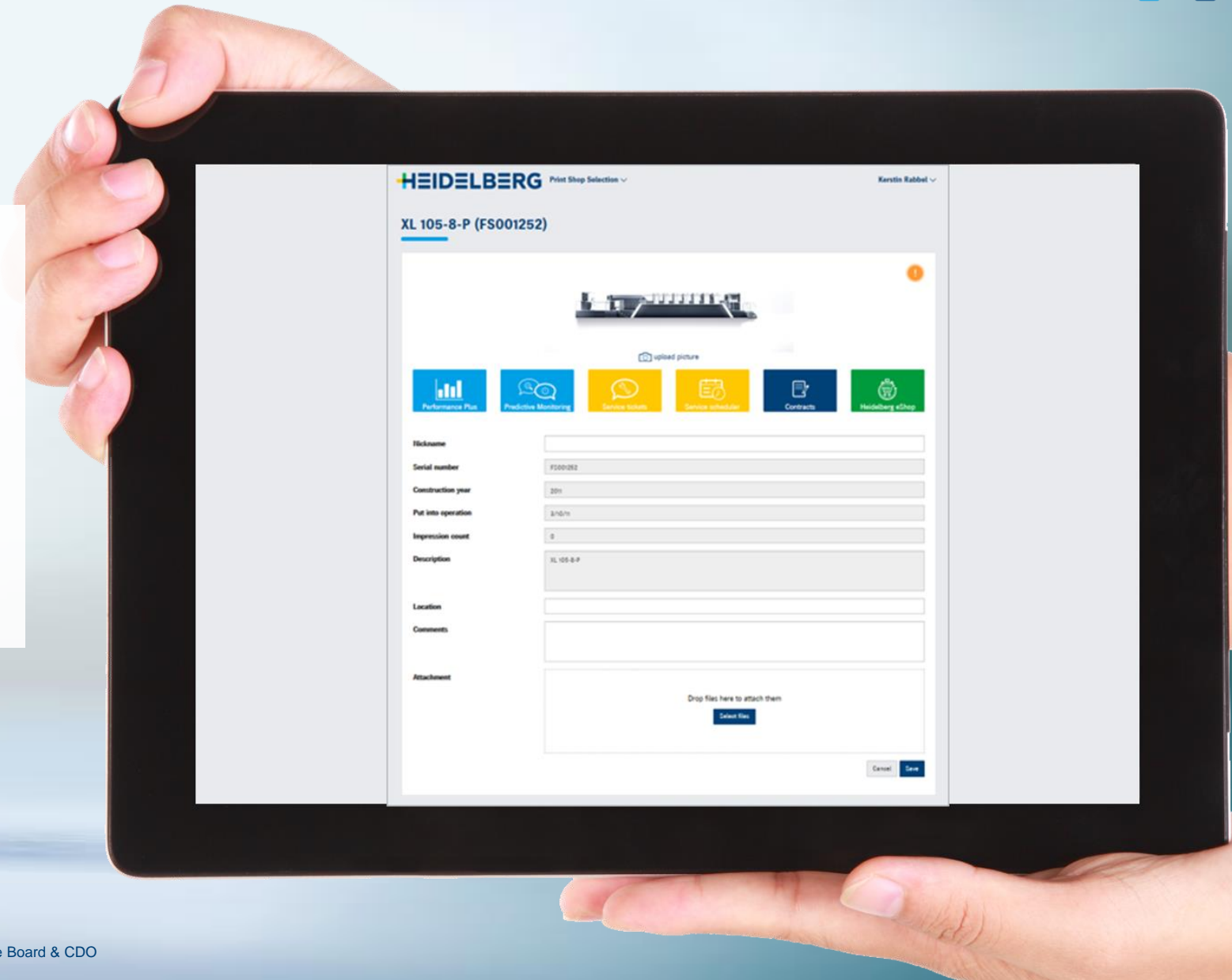
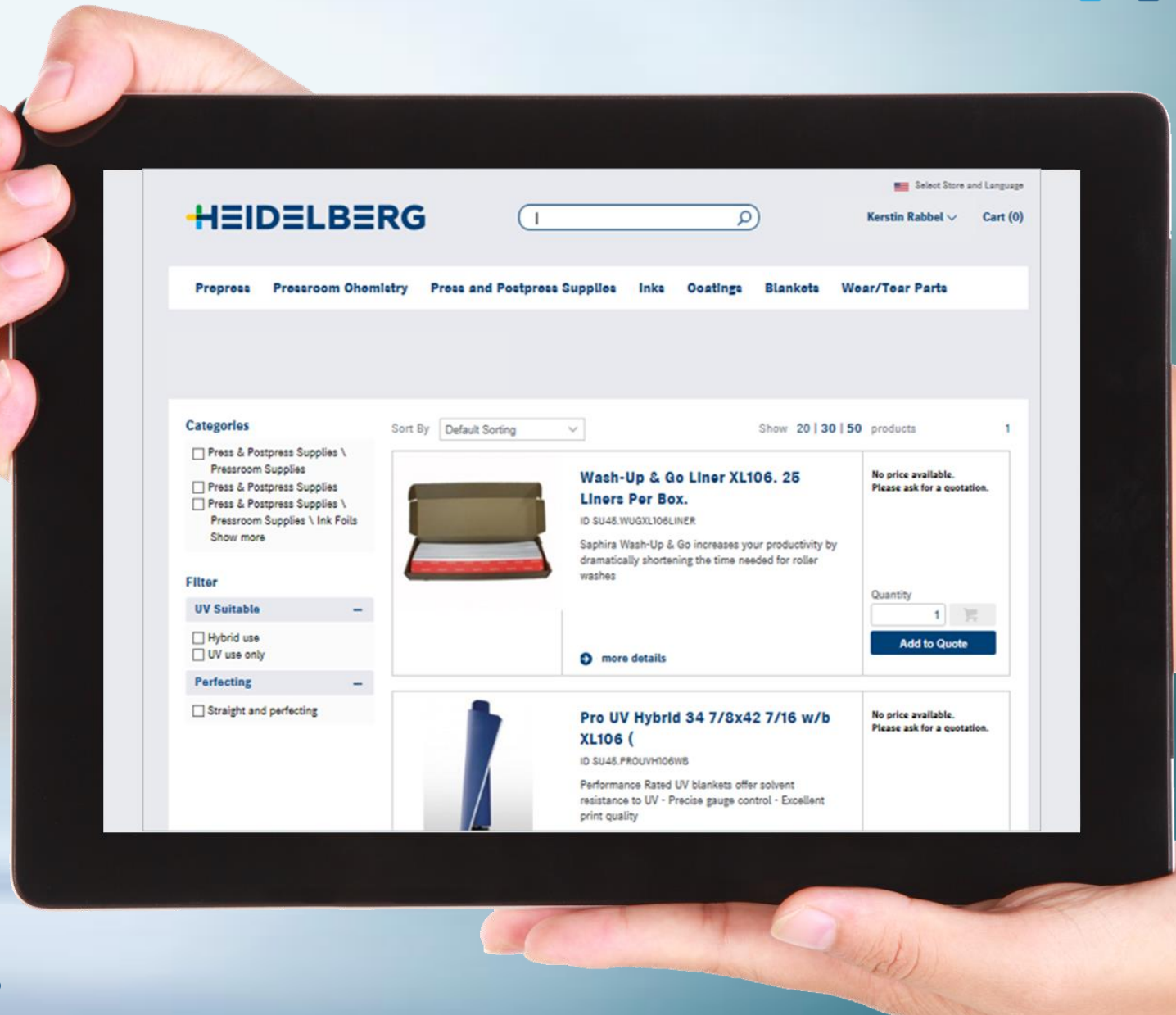# Heidelberg Assistant.
Shopping – suitable for the machine.

→ Direct access from the equipment to a pre-selected list of suitable consumables in the eShop.

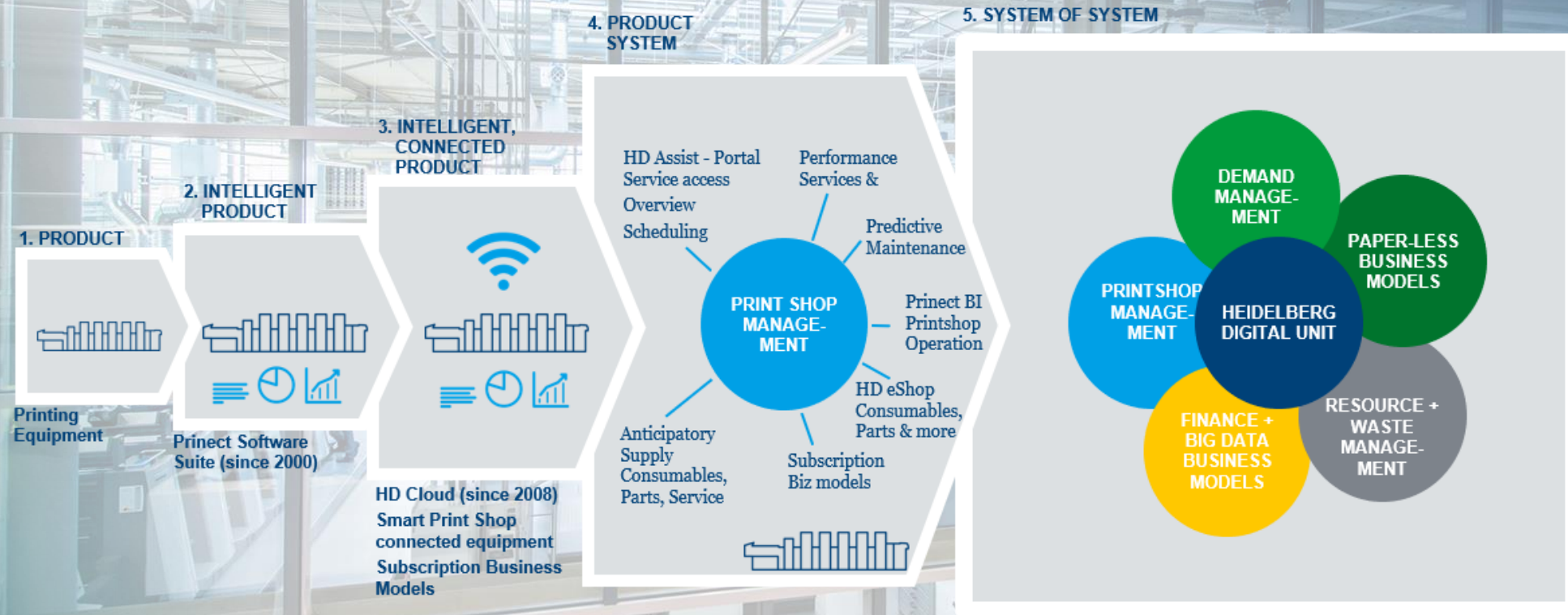→ Spare parts clarification and ordering.

Heidelberg has a vision.
Operate the global leading digital ecosystem of the Print Media Industry.

Heidelberg Digital Unit.
Creating the ecosystem platform for print media industry in China.

DEMAND MANAGE-MENT

PRINTSHOP MANAGE-MENT

HDU ECOSYSTEM PLATFORM

PAPER-LESS BUSINESS MODELS

FINANCE + BIG DATA BUSINESS MODELS

RESOURCE + WASTE MANAGE-MENT

∞ Possibilities