Push to Stop:
The new Speedmaster operating concept

Prinect User Days

Nick Trabold and Juergen Mittmann | Heidelberg, 15.11.2016

"Push to Stop"

365 days | 24 hours per day | 18.000 sheets per hour

= 158 million sheets per year
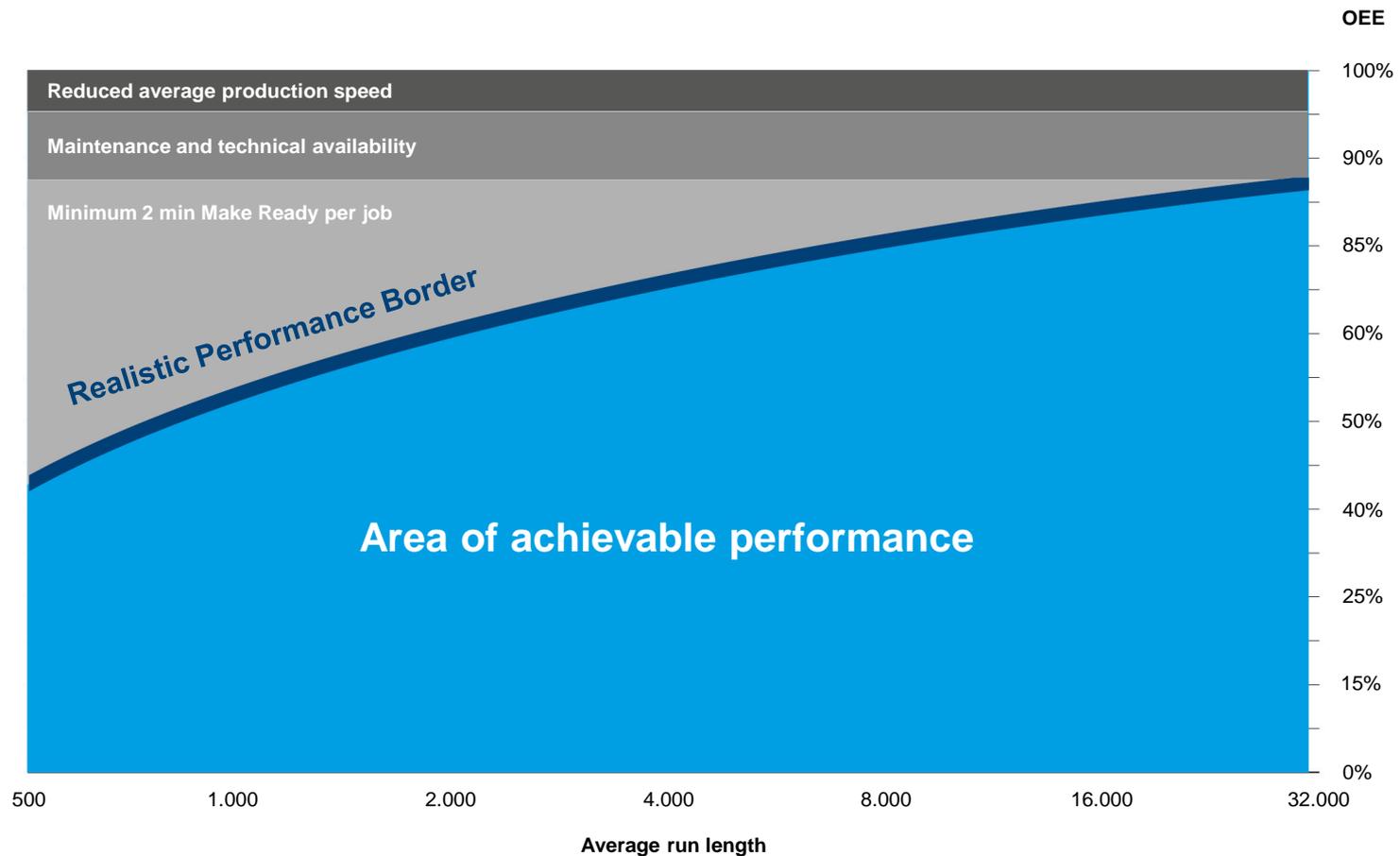
= 100% Overall Equipment Effectiveness (OEE)

Overall Equipment Effectiveness.
What Overall Equipment Effectiveness (OEE) is achievable?

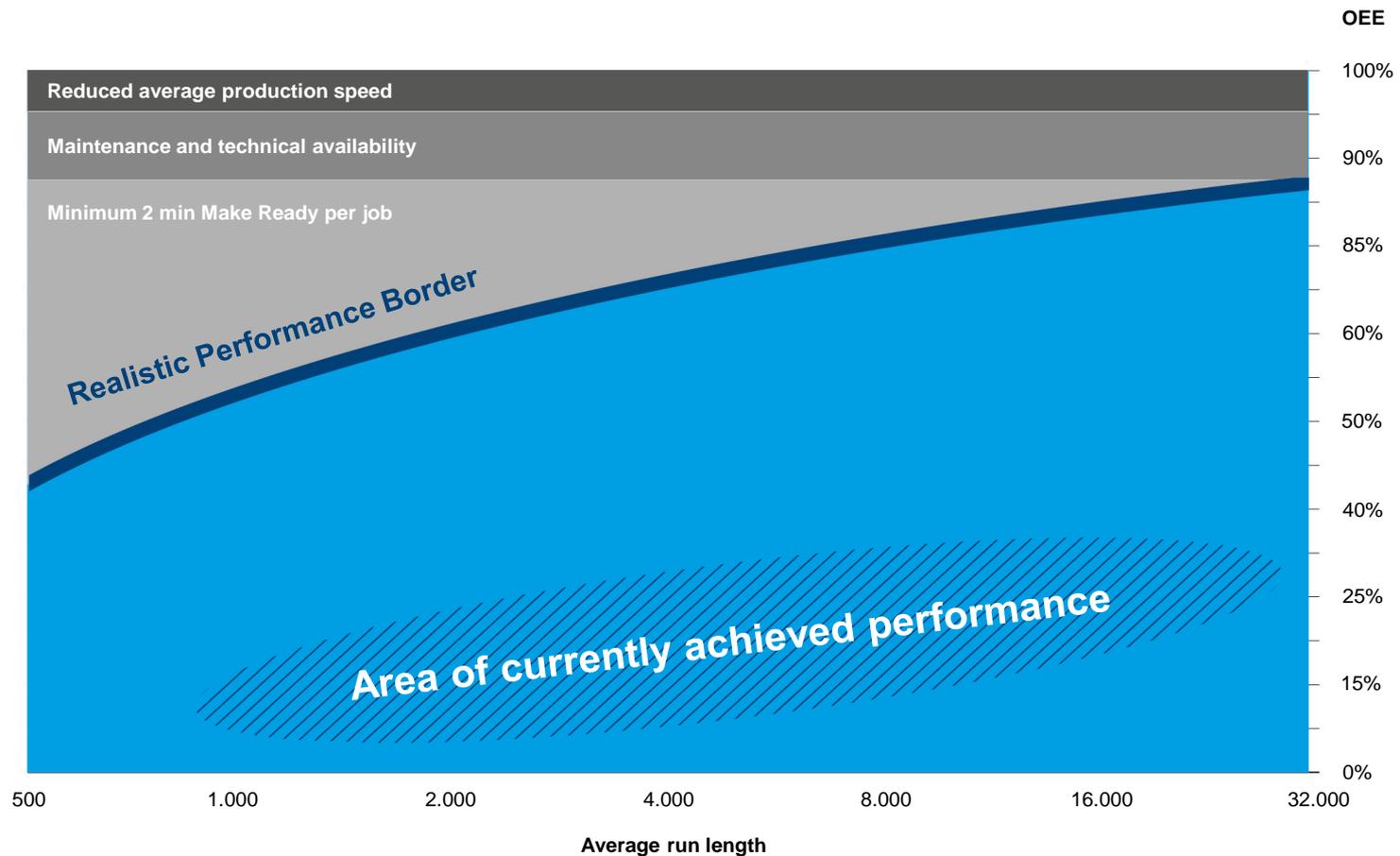100% OEE is not realistic – it makes sense to define an area of achievable performance

OEE

Reduced average production speed	100%
Maintenance and technical availability	90%
Minimum 2 min Make Ready per job	

Realistic Performance Border

Area of achievable performance

Average run length: 500 · 1.000 · 2.000 · 4.000 · 8.000 · 16.000 · 32.000

OEE axis: 100%, 90%, 85%, 60%, 50%, 40%, 25%, 15%, 0%

Overall Equipment Effectiveness.
Overall OEE today is at ~ 20-25%

There is still a lot of room for improvement

OEE

Reduced average production speed

Maintenance and technical availability

Minimum 2 min Make Ready per job

Realistic Performance Border

Area of currently achieved performance

100%

90%

85%

60%

50%

40%

25%

15%

0%

500   1.000   2.000   4.000   8.000   16.000   32.000

Average run length

Overall Equipment Effectiveness.
The average OEE will double in the next 10 years

Some already utilize the potential - you can find them in the Get Inspired Campaign

OEE

Reduced average production speed

Maintenance and technical availability

Minimum 2 min Make Ready per job

Realistic Performance Border

Area of currently achieved performance

100%
90%
85%
60%
55%
50%
40%
25%
15%
0%

500 · 1.000 · 2.000 · 4.000 · 8.000 · 16.000 · 32.000

Average run length
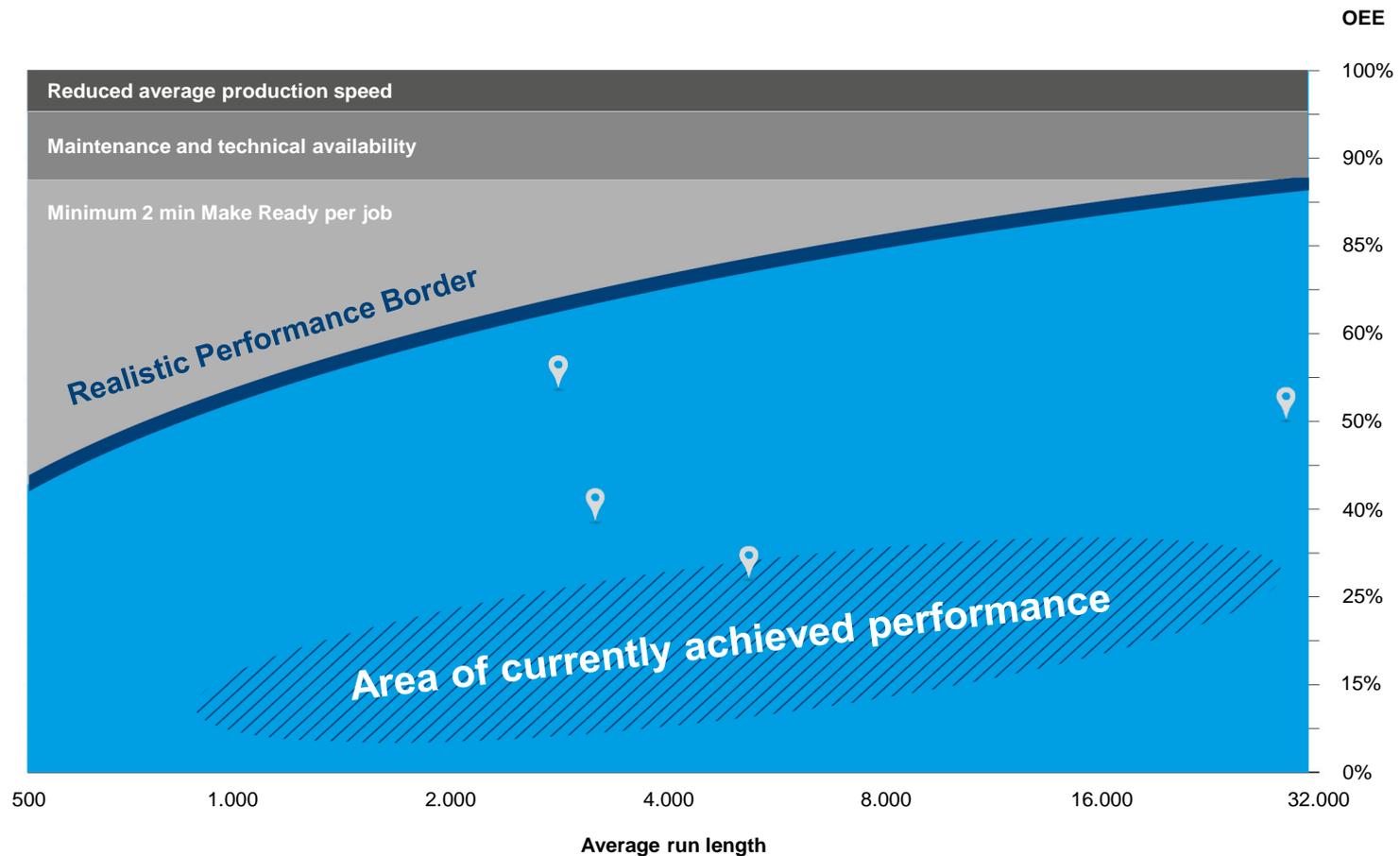
Overall Equipment Effectiveness.
Boosting OEE through automation and integration

Smart Print Shop: Improved OEE and Profitability

OEE

- 100% Reduced average production speed
- 90% Maintenance and technical availability
- Minimum 2 min Make Ready per job

Realistic Performance Border

Smart Print Shop

Area of currently achieved performance

Average run length: 500, 1.000, 2.000, 4.000, 8.000, 16.000, 32.000

OEE scale: 0%, 15%, 25%, 40%, 50%, 60%, 85%, 90%, 100%
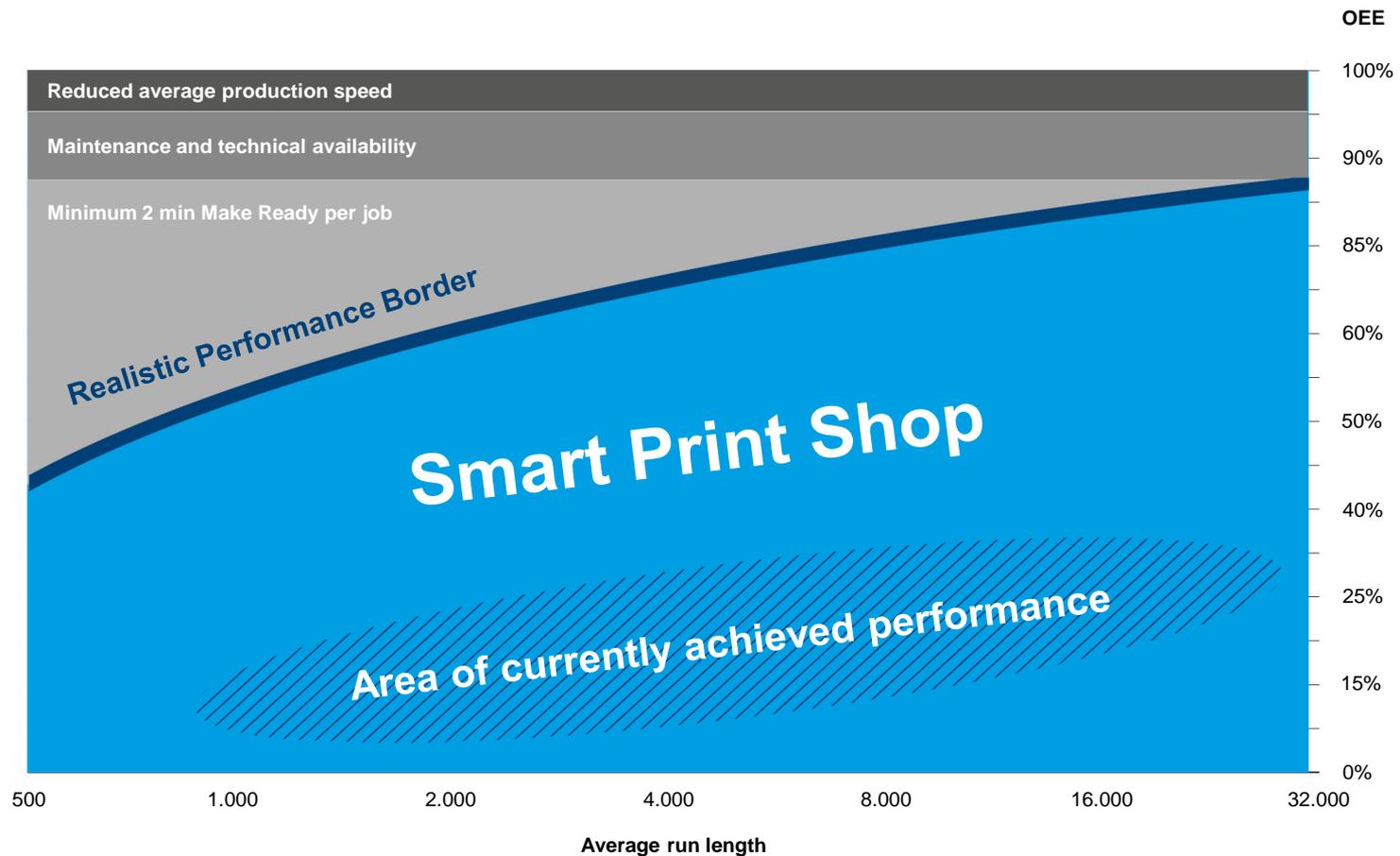
Overall Equipment Effectiveness.
Key parameters for boosting OEE in long runs

In the past 20 years we made quantum loops in gaining productivity in medium an long runs

OEE

Reduced average production speed

Maintenance and technical availability

Minimum 2 min Make Ready per job

Realistic Performance Border

10 jobs per **day**

High net Speed

10 jobs per **shift**

**Automated fast
Make Ready**

100%

90%

85%

60%

50%

40%

25%

15%

0%

500   1.000   2.000   4.000   8.000   16.000   32.000
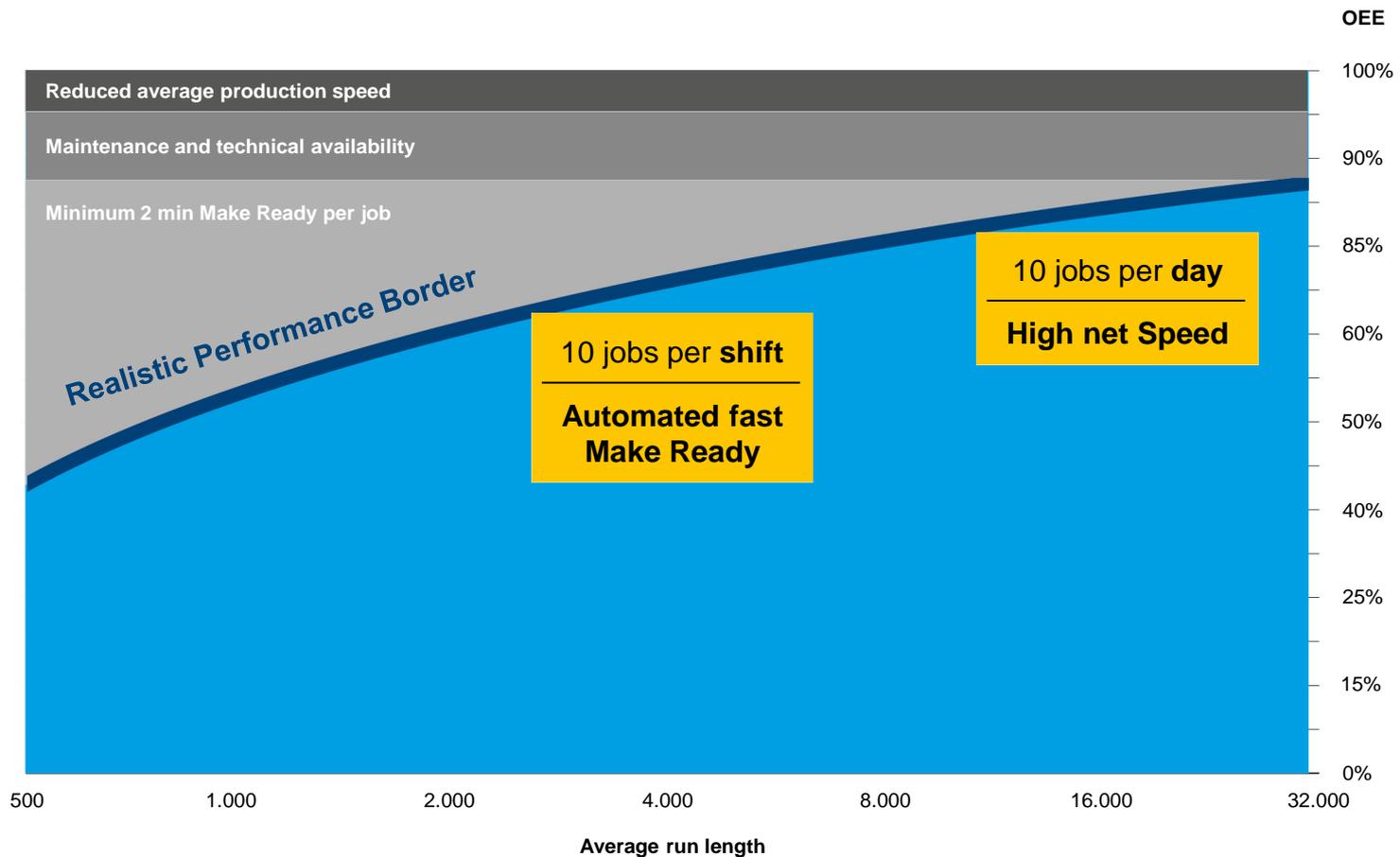
Average run length

Overall Equipment Effectiveness.
The average run length will continue to decrease

Trend is to even shorter runs – a new way of thinking required

OEE

Reduced average production speed

Maintenance and technical availability

Minimum 2 min Make Ready per job

Realistic Performance Border

10 jobs per **day**

High net Speed

10 jobs per **shift**

Automated fast Make Ready

10 jobs per **hour**

New solutions required

Trend

100%

90%

85%

60%

50%

40%

25%

15%

0%

500   1.000   2.000   4.000   8.000   16.000   32.000

Average run length
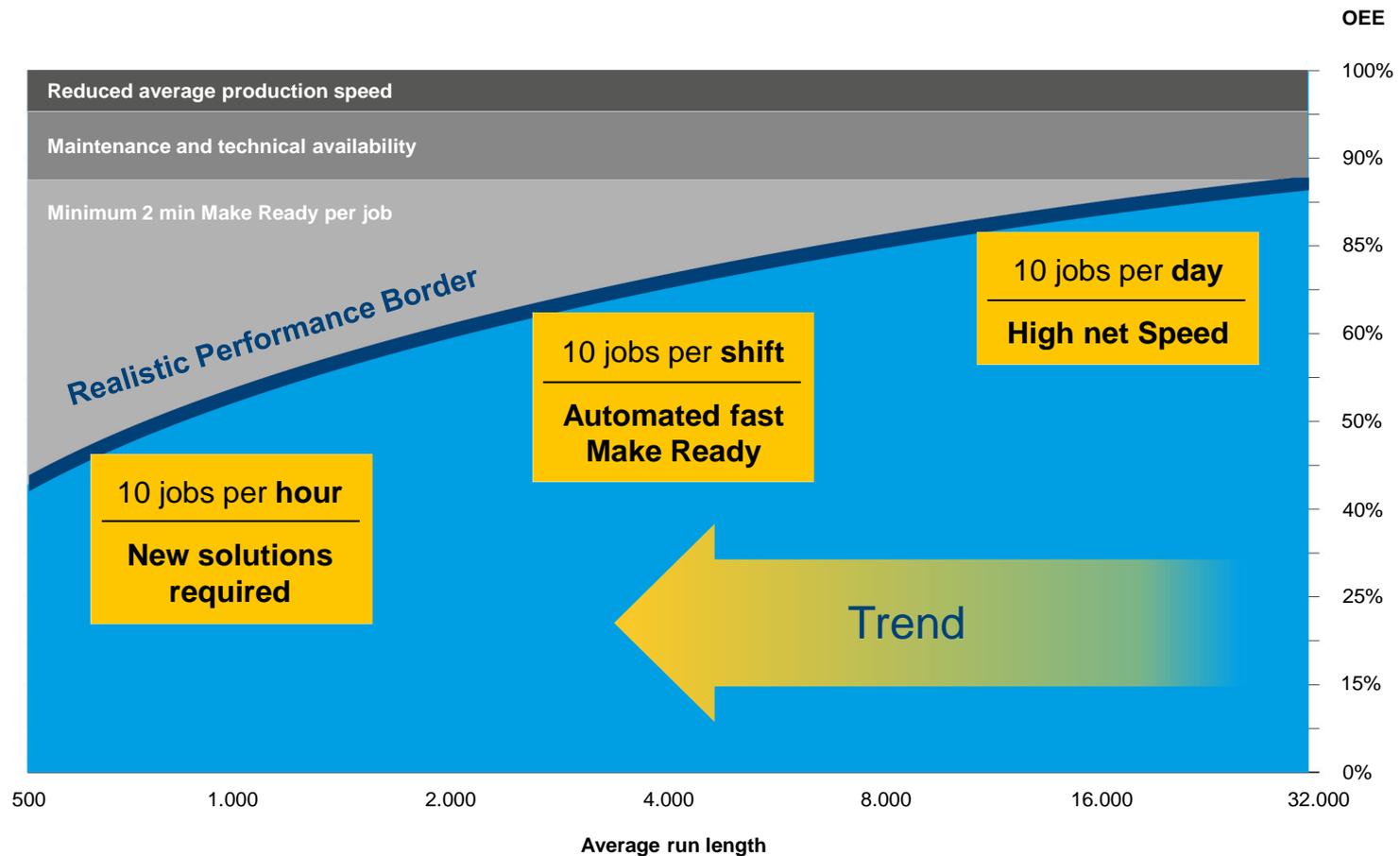
Overall Equipment Effectiveness.
We have to change our mindset completely …

Today

We initiate processes and start them actively

"Push to Start"
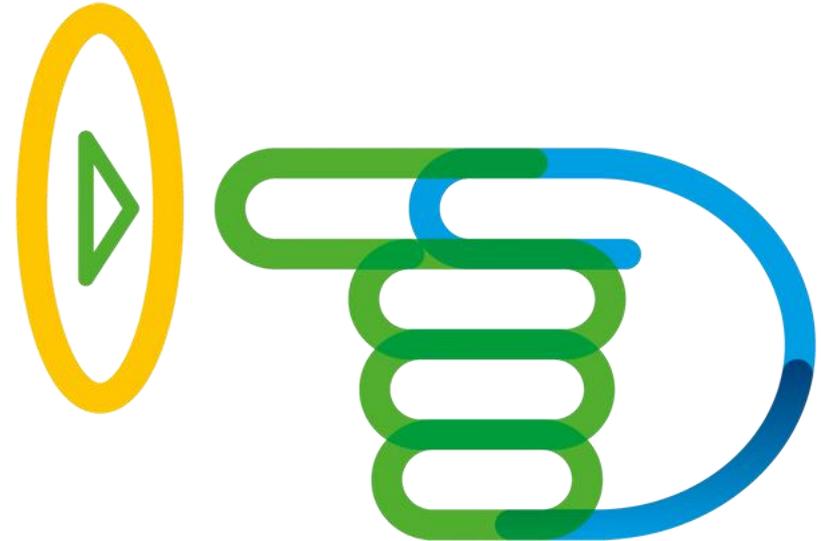
Overall Equipment Effectiveness.
We have to change our mindset completely …

Paradigm change

More process will run autonomous.
We only interrupt if necessary.

"Push to Stop"

Overall Equipment Effectiveness.
Smart Print Shop and Push to Stop

Assumption:
- The industry average OEE will double within the next 10 years.
- The trend to shorter and shorter runs will continue.

Heidelberg is the only supplier with a holistic approach to make this happen.

Increase OEE

Speedmaster · Services · Prinect · Saphira
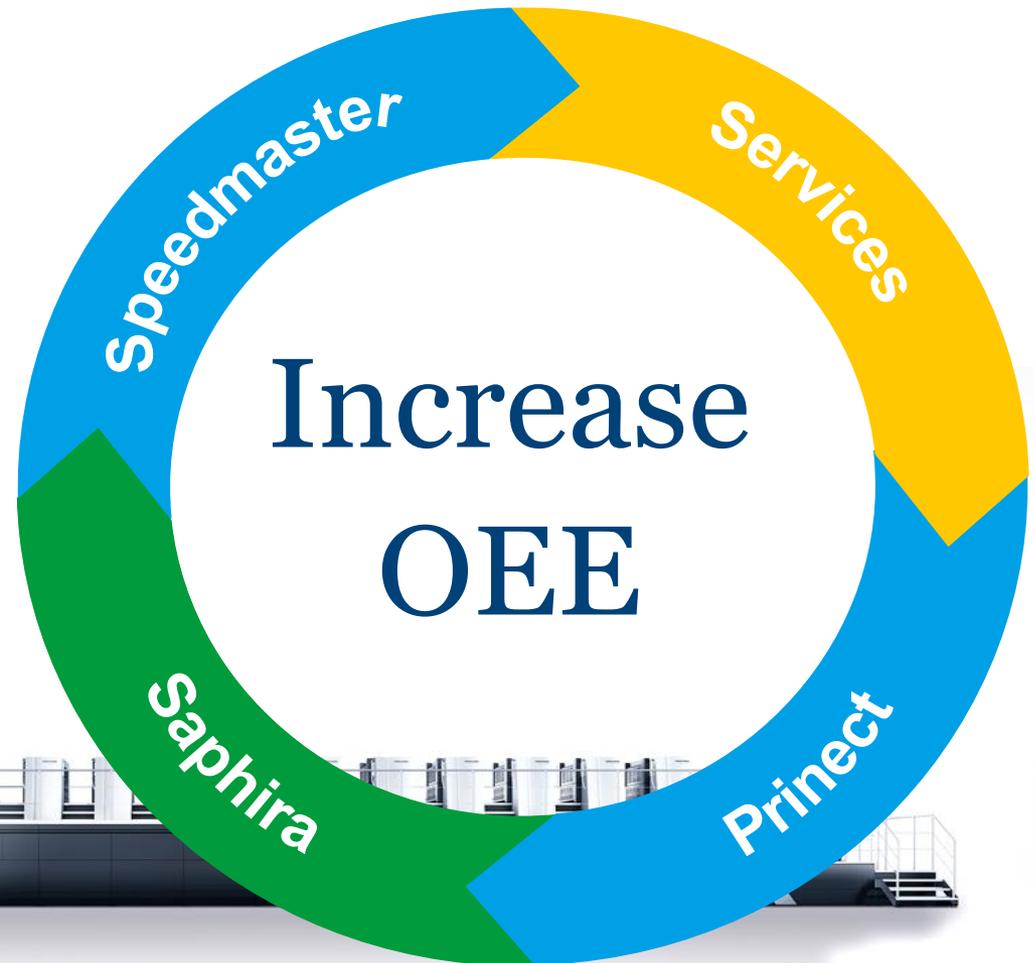
Drupa 2016 – World Premiere.
Intellistart 2 makes the difference
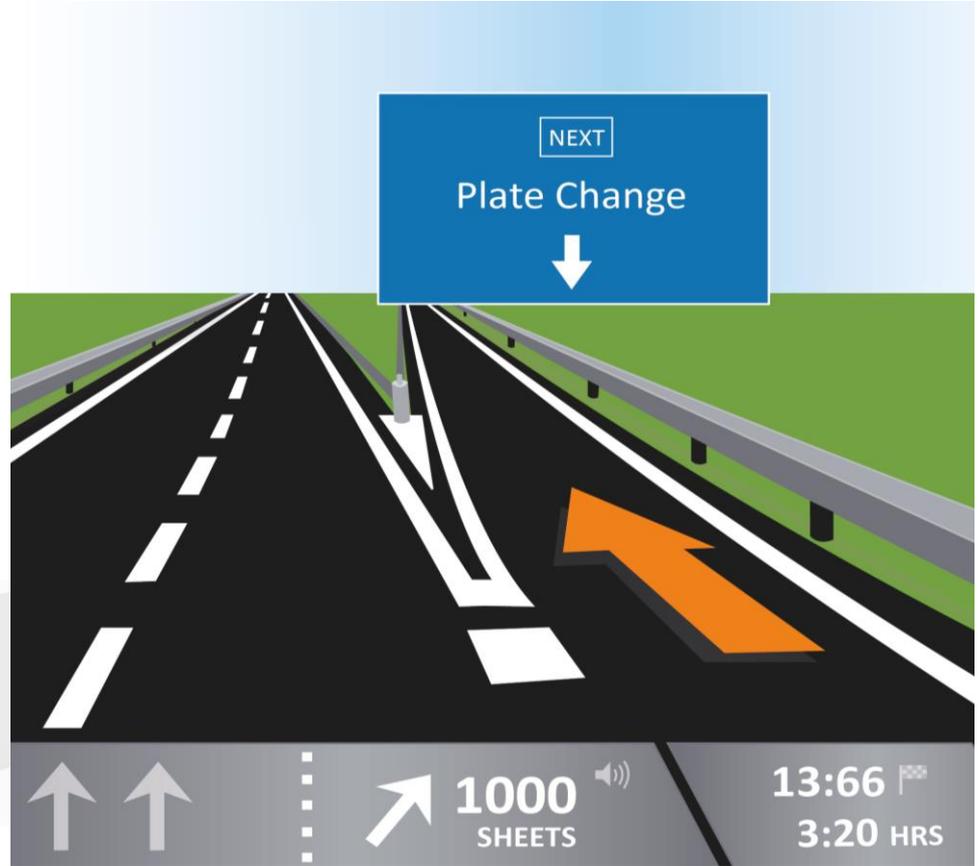
Intelligent navigation und automation

Intellistart 2 makes the difference.
The four key functions

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Job Queue

It is now possible to prepare and release up to 30 jobs during the current production run!

Intellistart 2 makes the difference.
The four key functions

Job Queue

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Process View

All relevant make-ready steps will be calculated automatically and visualized for each printing unit in a matrix!

Intellistart 2 makes the difference.
The four key functions

Intelliguide

It is now possible to visualize the whole make-ready process, the green progression bar offers the press status!

Job Queue

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Process View

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Intellistart 2 makes the difference.
The four key functions

Intelliguide

It is now possible to visualize the whole make-ready process, the green progression bar offers the press status!

Quality Assist

It is now possible with Inpress Control 2 to turn on the good sheet counter fully automatic and mark the good sheets with the tap inserter option InsertStar after the quality parameters are within the required standard!

Job Queue

It is now possible to prepare and release up to 30 jobs during the current production run!

Process View

All relevant make-ready steps will be calculated automatically and visualized for each printing unit in a matrix!

17

Intellistart 2 makes the difference.
The four key functions

Intellistart 2 drives the whole make ready process and even starts the production!

Push to Stop.
Autonomous and navigated printing
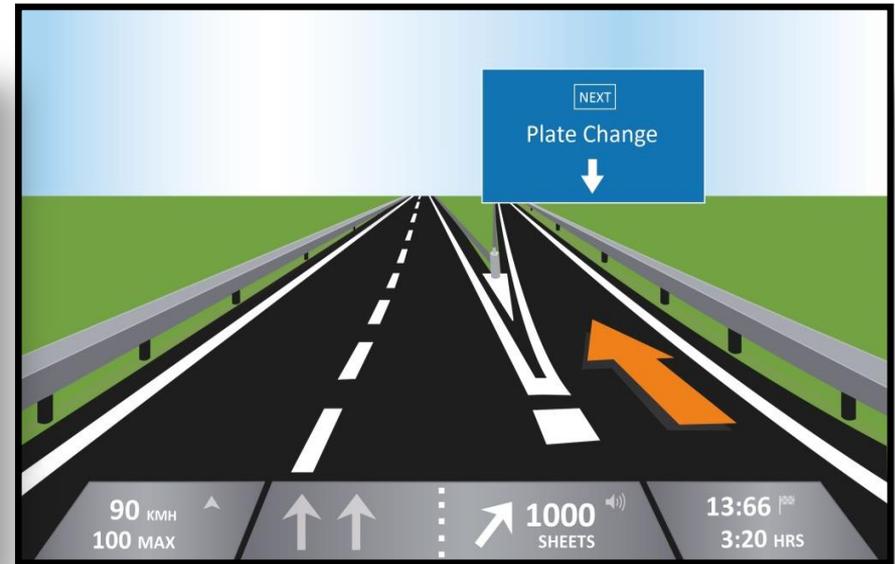
New Intellistart 2 with Quality Assist

→ Executes autonomously the fastest makeready strategy

→ Operator-independent and predictable

New Intellistart 2 with Intelliguide

→ Calculates the fastest make ready strategy

→ Guides the operator through the individual steps on the press

Push to Stop – for commercial standardized printing.
Unique autonomous printing functionality

Push to Stop.
Autonomous and navigated printing

New Intellistart 2 with Quality Assist

→ Executes autonomously the fastest makeready strategy

→ Operator-independent and predictable

New Intellistart 2 with Intelliguide

→ Calculates the fastest make ready strategy

→ Guides the operator through the individual steps on the press

Push to Stop – for packaging printing.
Smart navigating through complex processes

Push to Stop – for packaging printing.
Smart navigating through complex processes

The progress of each process is displayed! Intellistart 2 navigates the operator through the individual steps on the press.

Prinect Workflow as the key component.
Jobs on the way into the Job Queue

Job Queue:

Here you can find the jobs, which are already prepared and release d for the job production in sequence as planned.

Job list:

Here you can see all the jobs coming from your workflow which can be prepared and printed on the press.

After the are prepared and released the will be stored in the Job Queue!

Prinect Workflow as the key component.
Job preparation at the Wallscreen XL

Prinect Workflow as the key component.
Releasing jobs with 2 clicks possible

Job information for preparation:
- Checking job data from workflow
- Loading jobs into the "Job Queue" by releasing ready jobs with two clicks

Prinect Workflow as the key component.
Less job information available

Prinect Workflow as the key component.
Full integration offers you all job data at a glance

Prinect Workflow as the key component.
Prinect Widgets makes life easier

→ The new Prinect Widgets provide direct access to Prinect functionalities:

- **Machine status:**
  Displays activity of started job

- **Overprint:**
  Displays critical areas of progressing and upcoming jobs

- **Plate on demand:**
  Displays actual amount of demanded plates in progress

- **Pallet sheet:**
  Displays pallet number and copies on pallet with fast reprint function
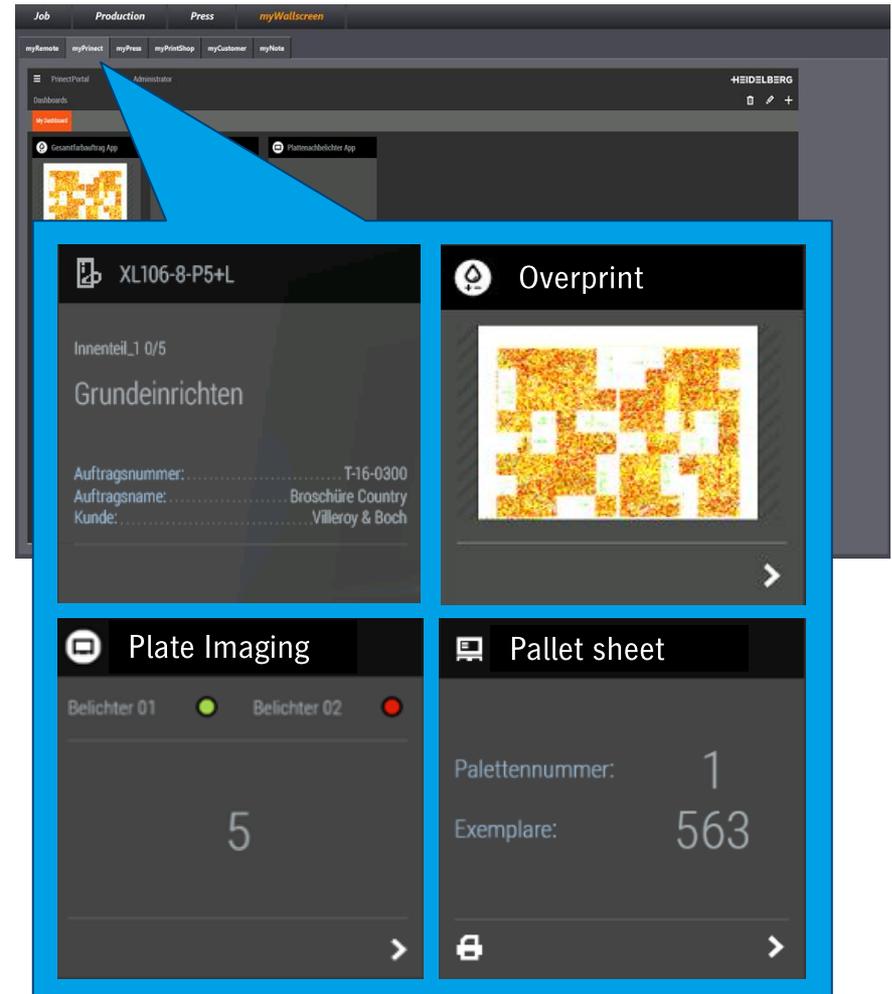
The new operation philosophy.
Makes navigated and autonomous printing possible

Push to Stop and the new operation philosophy.
What's in it for me as a printshop?

Press	Generation	Sheets/a	Plates/a	Jobs/a
SM 102-8-P 2004		26 million	23,000	~ 3,000
XL 105-8-P 15k 2008	1. Generation	35 million	81,200	~ 10,100
XL 106-8-P 18k 2012	2. Generation	40 million	93,700	~ 11,600
XL 106-8-P 18k 2016	3. Generation	55 million	153,400	~ 19,000
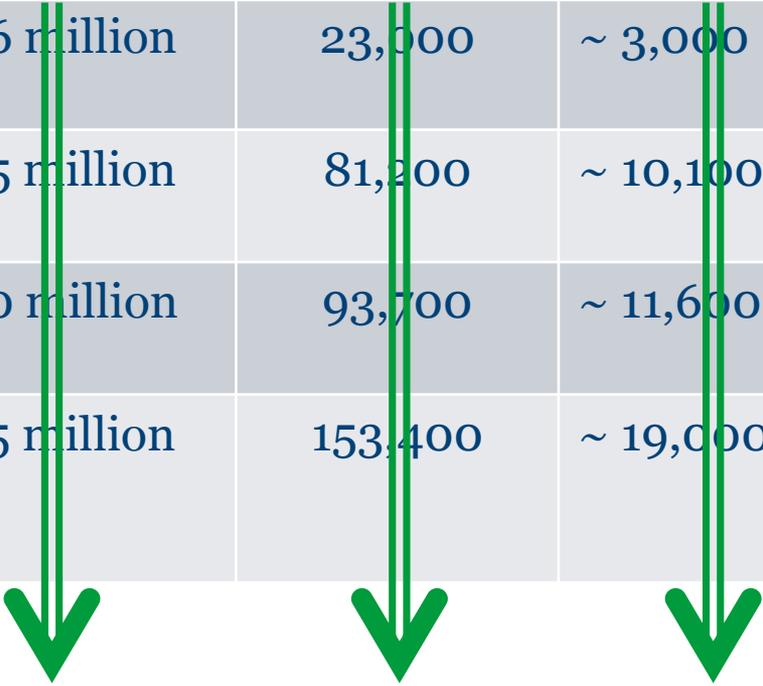
+210%   **+660%**   **+630%**

Push to Stop – let´s get started.
With Heidelberg's unique products and services

- Most advanced and comprehensive Workflow Integration with **Prinect**

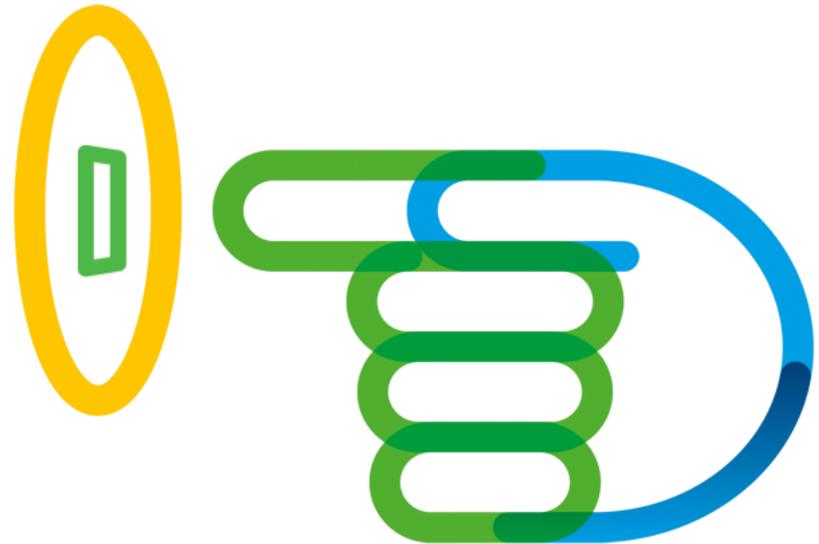- Powerful **automation Features** combined with the unique **Intellistart 2** Software

- **Smart Services** to achieve a maximum of uptime

- Tried and tested **Consumables** to grant a stable production environment

= Smart Print Shop

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